Exploring an Online Support Group Devoted to Parents of Children with Speech Impairments: A Qualitative Multiple Case Study

Dissertation Manuscript

Submitted to Northcentral University

Graduate Faculty of the School of Education
in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF EDUCATION

by

MARY ELLEN GROSS DENMON

San Diego, California
May 2019

Approval Page

Exploring an Online Support Group Devoted to Parents of Children with Speech Impairments: A Qualitative Multiple Case Study

By

MARY ELLEN GROSS DENMON

Approved by the Doctoral Committee:

DocuSigned by: Rebecca Collins DC712F6748334C0...	PhD	06/13/2019 | 15:30:46 MST
Dissertation Chair: Rebecca Collins	Degree Held	Date
DocuSigned by: Denise Winsor 13826E1F58584A7...	Ph.D.	06/13/2019 | 13:00:28 MST
Committee Member: Denise Winsor	Degree Held	Date
DocuSigned by: Joanna Vance A9C918E153B04AC...	PhD	06/13/2019 | 15:03:12 MST
Committee Member: Joanna Vance	Degree Held	Date

Abstract

Parents of speech impaired children have explicit issues to deal with in their quest for the remediation of their child's disability. The theoretical framework of this qualitative multiple case study emerged from the review of both the literature and Internet resources and guided the researcher in examining these five variables: (1) being a parent of a child with the disability of SI could be stressful; (2) parents of children with disabilities have been helped by joining groups for support; (3) support groups can be facilitated online; (4) there are online support groups for parents of children with various disabilities; and, (5) however, an Internet search did not locate an interactive online support groups (OSG) for parents of children with SI. Utilizing quantitative methodology, an online questionnaire was chosen as a vehicle for data collection for this multiple case study. For this study, a sample of speech therapy personnel was located with the assistance of the American Speech-Language-Hearing Association (ASHA) and invited to complete an online computer assisted self-administered interview (CASI) questionnaire. Across the span of answers to questions posed by the online survey in the form of a questionnaire a hierarchy emerged. Parents' ability to locate information was deemed paramount by respondents. This was followed by a quest for tangible assistance. The third area was the opportunity to network with other parents of SI children. These themes were universal in the respondents' opinions regardless of type of question (open-ended, ranking, or Likert) posed by the researcher. An unanticipated theme emerged. The author of the present study coined that theme as 'Consumer Alert'. It focused around a concern by the respondents that parents of SI children were given accurate information. An interested party, such as a parent or a SLP, who may want to develop an OSG for parents of SI

children are invited to use the results of this study as a possible source of information for the construction of such a website. Additionally, future researchers may consider expanding this study by replicating the data collection process with a sample of parents of children with diagnosed or suspected SI.

Acknowledgements

If this were a dedication page, which usually has only one name listed, rather than an acknowledgement page, which may have multiple names, the name I would choose is that of my precious sister, Nancy Shaw. In every step of this path she was with me- to cheer me through hard times and to celebrate milestones. However, it is an acknowledgement page, but she is at the apex of those to whom I am grateful. In addition, my dear friend, Sandra Campos, was ever present to give any kind of support that was needed. My husband Gary was especially helpful with the arduous task of addressing and stamping 1000 postcards.

Thanks also to the NCU faculty: Rebecca Collins, Denise Winsor, and Joanna Vance. Dr. Collins, you always encouraged me and never let me wallow. You came at a time when things were going very poorly for me and set me on the right path. I will always be grateful to you. Dr. Winsor thank you for facilitating the stretching of the boundaries of my writing abilities and helping me go further than I thought I could. Thank you also, Dr. Vance. Your astute editing is truly amazing.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

Every disabled child in the United States is guaranteed a free and appropriate public education (FAPE) by legislation (Public Law 94-142, p. 3). However, any disability that is the conduit to FAPE can also a pathway to guilt for parents of children with special needs (Lalvani, 2015). The reasons a parent might experience guilt may be deeply imbedded by history with supposed causes of disabilities ranging from a displeasing of the gods in ancient times to being of poor moral character in the eighteenth century (Lalvani, 2015). In the twentieth century parents were encouraged by mental and medical personnel to leave the care of their severely disabled child to professionals in institutions as the parents were not thought to be capable of the task (Lalvani, 2015). Parents may waver between the possibilities the etiology of the disability was something vital they neglected to do, to some sinister act they did do. Rollin (2000) added that parents begin to doubt their own nurturing abilities when it becomes evident that there is a communication disorder, suspecting that they are somehow the cause of the problem. They may also experience feelings of inadequacy when they compare their disabled child to those of family, friends, and neighbors. Luterman (2017) stated parents feel they failed their hearing-impaired child through something that was innately wrong with themselves. Tellis and Barone (2016) indicate that parents may keep pertinent information from those who interact with their disabled children because of these negative emotional states. Luterman (2017) further stated the feeling of guilt may take on another form: that the burden of the care of the child is so great that the parent fantasies about the child’s demise which is the genesis of another kind of guilt. They may be obsessive about finding the cause so that they can assign some sort of guilt to another person.

Many people of a certain age share a similar memory. Although it is hard to imagine today, numerous older Americans, who attended school prior to the implementation of the Education of All Handicapped Children Act, remember a neighborhood child who was somehow different than the other children and did not go to school when the other kids did. This recalled child remained at home with a mother, a grandmother, or a babysitter while the other children on the block attended the neighborhood school from kindergarten through graduation. But not all of these different or disabled children of an era in the not so distant past remained at home with their family. Many of these children lived in residential placement. Indeed, these institutionalized children largely stayed in such placement until the implementation of the Education of All Handicapped Children Act, also known as Public Law 94-142 which was passed in 1975.

The landscape of childhood disabilities has changed markedly over the years. In the 1960s the face of a pediatric disability was on a poster of a child with polio propped up by crutches and legs encased in braces. The scourge of that crippling disease has largely been eradicated but in the 2010s the specter of autism, which was little known five decades earlier, haunts many parents (Halfon, Houtrow, Larson, & Newacheck, 2012). Medical technology has also shaped the juvenile disability scene. Infant mortality has been decreased through medical intercessions. However, children who require extreme medical interventions tend to be at higher risk of the comorbidity of handicaps which may negatively impact their education (Halfon et al., 2012).

Haley, Hammond, Ingalls, and Marin (2013) liken the reaction to the assignment of a handicapping condition in special education to receiving a troubling medical diagnosis for parents. Some parents go through the same stages of grief when their child is labeled as a special education student as one who is confronted with a fatal diagnosis: denial, shock, and anger. Haley et al. (2013) noted these emotions are similar to the ones included in the stages of grief as outlined in the works of Elisabeth Kübler-Ross (Kellehear, 2014).

One specific type of handicapping condition is a speech impairment. A speech impairment exists if one's communication is compromised by mispronunciations, stuttering, or a language or voice disorder (American Speech-Language-Hearing Association, 2017). The National Center for Educational Statistics (NCES) estimated that the incidence of speech impairments makes up 20 percent of students from ages 3-21 who have a disability (NCES, 2017). This incidence is second only to that of specific learning disability with an incidence of 35 percent in the disabled population. However, in young children the most commonly reported developmental delay is speech impairment (Lewis, 2017).

Background

There is evidence to suggest technological advances, specifically the Internet and social media networks (e.g., Facebook, Twitter, healthcare specific websites), may facilitate the membership in support groups. However, many of these sites may not have designated links to medical or research-based information and advice coupled with real-life experiences of families of children with special needs; this lack of complete and accurate information may be misleading for parents seeking help via the Internet (Oprescu, Campo, Lowe, Andsager, & Morcuende, 2013).

Medical communities have used these assets known as information and communication technology (ICT) (Brashers, 2009). Because of factors in the changing health care tableau patients have been forced to take on increasing amounts of the responsibility of the management of their care (Czaja, 2015). Information technology can help with the dissemination of medical information for patients outside of the clinical setting to assist in this task. Online sites offer an array of medical information including discussions of symptoms, parameters of health such as blood pressure readings, doctor reviews, and listings of support groups germane to a condition or disease (Ardito, 2013).

A group of Danish researchers (Schook et al., 2014) endeavored to discover why lung cancer patients and their care givers accessed the “ask that doctor” feature of a health information website rather than consulting with their own specialist. The researchers discovered several reasons for this consumer movement. First, the respondents felt freer anonymously asking questions. They also used the site to obtain a second opinion. Finally, responses came more quickly and thus they did not have to deal with the anxiety of waiting for an appointment with their specialist.

Social network sites (SNS) such as PatientsLikeMe, QuitNet, and CureTogether have frequently been used as a platform for medical information (Gallagher-Thompson et al., 2012). As examples of online support groups, parents of children with various maladies (e.g., clubfoot and eating disorders) can find support through online and high-tech venues (Oprescu et al., 2013; Sharifi et al., 2012). Two specific reasons some support group participants favor online membership over face-to-face involvement encompass matters of convenience and quality of the interactions. The possibility of developing deep personal interactions online is one of the appeals of selecting this venue (Chung, 2013; Guo & Goh, 2014). Guo and Goh (2014) stated this type of relationship was rated more important than information gathering by individuals with HIV/AIDS posting on a Chinese microblog. Likewise, Chung (2013) stated prospective group members favored online support groups

(OSG) to expedite more intense individual relationships with others who are experiencing similar problem than offline groups could facilitate.

At times, the ability to physically attend support meetings is not possible due to scheduling or geographical constraints (Lemma & Fonagy, 2013; Patterson, Brewer, & Stamler, 2013). In their meta-analysis of 16 peer-reviewed journal articles Patterson, Brewer, and Stamler (2013) discovered parents of children with chronic illness and disabilities were more likely to participate in online support groups due to convenience and flexible time commitment. Lemma and Fonagy (2013) posited attendance also may be limited by psychological constrictions such as a patient's reluctance to work with professional personnel face-to-face. In all of these circumstances utilizing technology to participate via an online venue can be a possible solution. Participants in an OSG may include the patient or their caregivers. Sometimes both groups participate on a single site- such as an Australian OSG for patients who have been exposed to asbestos and their caregivers; the site is called "Dusted" (Kozlowski, Provost, Tucker, & van der Zwan, 2014).

Parents of speech impaired (SI) children must prioritize their children's needs. For example, without being given specific knowledge parents might seek remediation for mispronunciations of these sounds which are developmentally acceptable (McLeod, Harrison, McAllister, & McCormack, 2013; Sander, 1972). Sander (1972) authored a seminal article in the annals of speech pathology detailing when non-vowel phonemes, or speech sounds, emerge in the oral repertoire of a normally developing child. Sander's (1972) work was supported by such researchers as McLeod, Harrison, McAllister, and McCormack (2013) when they reported some sounds, or phonemes, such as /s/, /z/, /r/, and /th/, are late developing and do not require therapeutic intervention at a young age in order to help the child pronounce them correctly. However, this data is not common knowledge.

Factors negatively impacting a mother's and father's well-being are important to consider as parental health is an integral contributor to the overall development of children. Raising a special needs child can be stressful for parents and can result in impaired parental welfare and health (Foody James, & Leader, 2014). The term *special need* encompasses a wide range of conditions. A special needs child may have a physical, emotional, or an intellectual handicap. He or she may also have a combination of these handicaps. Since the 1970s parents of children with intellectual disabilities and autism have sought one another for support and information through networking (Singer, Hornby, & Park, 2012). One way to fortify parents of special needs children is through membership in support groups.

One area of special education is speech therapy. Parents of children diagnosed as SI have explicit issues to deal with in their quest for the remediation of their child's communication difficulties. They have specific concerns, fears, and anxieties as well as questions regarding services available and possible home interventions. When parents are not informed, they seek information. The Internet is a popular place to initially seek information.

Statement of the Problem

The problem examined in this qualitative multiple case study was a lack of social media in the form of online support groups (OSGs) offering opportunities of support services available for parents of speech impaired students. Social media is unlike any other form of media as those partaking of it can interact with one another (Alat, 2017; Peters, Chen, Kaplan, Ognibeni, & Pauwels, 2013). With all of the evidence in the literature of powerful improvements in the socio-emotional status of patients and their families (Chung, 2013; Clifford & Minnes, 2013a; Kozlowski et al., 2014; Lemma & Fonagy, 2013; Leung, Leung, & Fong, 2013; Patterson et al., 2013) as well as information sharing via OSGs (Guo & Goh, 2014; Oprescu et al., 2013) one would assume this would be a popular venue for all parents of children with disabilities. A group of parents who seek out others are mothers and fathers of children with Down syndrome via an OSG offering opportunities of support services (Down syndrome: Parents sharing, 2016). This resource allows parents of Down syndrome children to reach out to ask and answer questions germane to the challenges they face in common. Experts in the field share important information. A similar website and OSG dedicated to parents of children with SI would be helpful to that population. However, a Bing search of February 25, 2018 revealed no such interactive OSG currently exists.

Online sites may also be a conduit for information needed in order to provide the important parental reinforcement of skills which are garnered through speech therapy (Roberts & Kaiser, 2011; Swift et al., 2016; Trajkovski, Andrews, & Packman, 2010). These sites may improve relationships between speech-language pathologists (SLP) and parents which at times can be strained (Smith, Romski, Sevcik, Adamson, & Bakemana, 2011).

Purpose of the Study

The purpose of this qualitative multiple case study was to determine what speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceived as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding: components of service, coordinated service, support from other parents, and components of information. Such a website might serve as an interactive OSG dedicated to speech therapy treatment and information sharing. The goal of this multiple case study was to provide information needed to develop an OSG as a vehicle by which to form a partnership between SLPs and parents of SI children. For example, parents wishing to enhance their preschool child's expressive vocabulary may seek links to websites which contain directions for creating manipulatives or downloading worksheets which broaden their child's knowledge of basic concepts such as color words. Such an interactive OSG could serve as a resource to find these materials. Another scenario in which such a website may prove helpful might be parents needing resources in order to counsel their SI children who might be targets of bullies which could be in the form of a web link (Blood et al., 2011).

Purposefully selected research participants, speech therapy personnel involved with the diagnosis, management, and treatment of SI children, were the subjects for this multiple case study. Their opinions of what should be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding: components of service, coordinated service, support from other parents, and components of information were units of analysis for this multiple case study. Data was collected via a questionnaire completed by speech therapy personnel. These subjects were elicited through the American Speech-Language-Hearing Association (ASHA), the national governing speech pathology body. The intent was to capture their perceptions of essential data based on their shared experiences to be included on a dedicated website devoted to speech therapy diagnoses and prognoses, general information, and reinforcement techniques of skills garnered through speech therapy.

There is a group which has much in common with parents of SI children. This group is comprised of parents of children with hearing or auditory impairment

(AI). Each group is made up of parents of children with communication disorders. However, there may be one significant difference between these two groups. That difference is the span of time each group of parents may be dealing with their child's disorder. Hopefully, a child with delayed speech will receive a diagnosis of SI between two to five years of age, undergo therapy, and the impairment will be corrected. However, the parent of an AI child may learn of their child's deafness at birth and that impairment will be dealt with by the parent and then later the child for the rest of the AI impaired individual's life. Fitzpatrick, Angus, Durieux-Smith, Graham, and Coyle (2008) sought to discover the needs of parents of AI children. Fitzpatrick et al. (2008) found the parents required: service coordination, availability of information, integration of social service and parent support. Although this particular group of respondents were satisfied with audiology and therapy services at the time they were interviewed, these were areas that may later need to be reexamined. Because of the similarities between parents of SI children and parents of AI children, the researcher framed the following research questions partially on the findings of Fitzpatrick et. al. (2008).

Research Questions

RQ1. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of service (e. g., screening, therapy, audiology, social support, and funding support)?

RQ2. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding coordinated service (e. g., co-located services and team coordination)?

RQ3. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding support from parents (e. g., organized through health services and through parents' groups)?

RQ4. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of information (e. g., therapy/resource options, prognostic guidance, and access to information)?

Nature of the Study

A qualitative multiple case study was selected as the most appropriate choice of method and design. In a quest for trustworthiness and truth in research the present multiple case study accessed authentic, credible research participants- speech therapy personnel (those involved with the diagnosis, management, and treatment of children with SI) to gain in-depth and first hand understanding of the phenomenon at hand. The central question answered by this multiple case study was: What do speech therapy personnel feel is essential to be included on a dedicated website for parents of children with suspected or diagnosed SI which is devoted to speech therapy diagnoses and prognoses, general information, and reinforcement techniques of skills garnered through speech therapy? The opinions and perceptions of these stakeholders provided the data that was analyzed in this multiple case study.

There is a sharp divide between the two methodological approaches frequently used by researchers (Cozby & Bates, 2012). Quantitative research centers on behaviors that can be measured or counted. Qualitative research can explore natural occurring behaviors as well as subjects' reflections and reports of those behaviors.

One tool that a researcher may use in a qualitative study is the case study (Creswell, 2009; Stake, 2006; Yin, 2004). This study meets the criteria set by Yin (2004) who stated that a case study is warranted if the following two conditions are met: (1) a *what* question is asked; and, (2) the researcher is looking for an understanding of the topic that is both intimate and comprehensive in order to answer the question he has posed. To meet the first condition, the research questions in this multiple case study was interrogative (e.g., What should be included on an interactive website for parents of speech impaired children?).

Acknowledging Yin's (2004) second condition, an intimate and comprehensive understanding of a topic, this multiple case study examined the beliefs of a group that held both intimate and comprehensive knowledge about the question at hand- what should be included in an interactive website for parents of children with suspected or diagnosed SI. The participating speech therapy personnel shared their insights via a questionnaire. Holbrook (2017) states that survey research in the form of questionnaire usage is widely employed in studies in the areas of the social sciences (education and public policy). Holbrook (2017) further explains that questionnaires can gather data about anything that can be evaluated by asking people about behaviors, events, knowledge, and attitudes.

This case study explored factors that stakeholders, speech therapy personnel, deemed necessary in an interactive website dedicated to providing information and support parents of children with SI. The intent of this case study was to gain an in-depth and first hand understanding of the phenomenon: what does speech therapy personnel deem necessary inclusions of an interactive OSG for parents of SI children. This in-depth understanding was accomplished by gathering data from authentic, credible research participants. Utilizing questionnaires was chosen as a vehicle in data collection for this case study.

Significance of the Study

This case study was conducted in the interest of enumerating what aspects of speech therapy treatment and information sharing may be necessary inclusions of an interactive OSG for parents of SI children. Presently there is a paucity of SLPs (Bureau of Labor Statistics [BLS], U.S. Department of Labor, 2014) and this shortage promises to continue in the foreseeable future. An online site dedicated to the needs of parents of children with speech impairments may serve to expand these scarce speech-language pathology resources. As a result of this multiple case study an interested party, such as a parent or a SLP, may be able develop an OSG as a vehicle by which to form a partnership between SLPs and parents of SI children, after learning what the case study's stakeholders deemed as necessary for such an endeavor.

Definitions of Key Terms

Information and communication technology (ICT). Information and communication technology (ICT) refer to the use of the Internet to bridge gaps between health providers and patients by using include informational websites, communication portals, and online records (Oprescu, Campo, Lowe, Andsager, & Morcuende, 2013; Brashers, 2009).

Online support group (OSG). Online support groups and its acronym (OSG) is the label applied to the Internet vehicle which can be used to expedite more intense individual relationships with others who are experiencing similar problems than offline groups can facilitate (Chung, 2013).

Speech impairment. The 2004 reauthorization of the Individuals with Disabilities Education Act defines a speech impairment as a "communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance" (34 CFR, §300.8 [c] [11]).

Speech-language pathologists. Speech-language pathologists are certified specialists who diagnose and treat communication impairments and swallowing disorders in patients, which may result from various causes including brain injury, developmental delay, or a cleft palate. SLPs hold at least a master's degree, have completed 400 hours of supervised practicum as well as a fellowship, passed a national board, and hold a Certificate of Clinical Competence (CCC) from ASHA (ASHA, 2018b).

Speech therapy diagnoses. There are multiple speech and language diagnoses which can affect children but the majority are contained in the following four: Articulation- incorrect production of speech sounds; *Fluency*- a disruption of the flow of speech; *Voice*- an abnormal vocal quality as to pitch, resonance, or loudness; and *Language*- difficulty in expressing or understanding verbal thoughts and ideas (Center for Parent Information and Resources, 2014).

Uncertainty Management Theory (UMT). For the purposes of this case study, Uncertainty Management Theory (UMT) is the practice used to ease anxiety or uncertainty by information seeking (Brashers, 2001).

Summary

Parents of children with SI may experience anxiety and uncertainty in their efforts to locate resources for their child. They frequently struggle to find information on how to locate professional help and advice on what they can do to assist their child. Being a member of a support group tailored specifically to the needs of these parents could ease some of this anxiety. Locating one with the convenience of being online would be a further comfort. However, even though there are OSGs for many handicapping conditions it is difficult to find any for this population.

The possibilities of the benefits of technology to the field of speech pathology are limitless. The goal of this case study was to gather data which could be used in the design and development of a dedicated website devoted to speech therapy diagnoses and prognoses, general information, and reinforcement of skills garnered through speech therapy. Such a website could be created for parents of children with diagnosed speech impairments or suspected speech impairments and could supplement and enhance the SLP-client's parent relationship. This case study investigated what stakeholders, speech therapy personnel, perceived should be included in such a support and informational website.

Chapter 2: Literature Review

The problem examined in this qualitative case study was a lack of social media in the form of online support groups (OSGs) offering opportunities of support services available for parents of speech impaired students. Social media is unlike any other form of media as those partaking of it can interact with one another. The purpose of this qualitative multiple case study was to determine SLPs' and SLP students' perceptions of tools needed by parents to support their SI child which might be included in the development of an interactive OSG dedicated to speech therapy treatment and information sharing.

The ability to communicate one's wants, needs, and thoughts is crucial for human existence. However, some children struggle uttering even one intelligible word. When a child does not meet communication milestones a parent may suspect a speech impairment (SI). A SI, or communication disorder, affecting a young child is one diagnosis among a variety of developmental delays (DD). School districts provide services to a diversity of children with special needs. Both the federal government and local regulatory agencies have input as to how those special needs are defined. An overall term that encompasses the types of areas of need of young children is DD of which SI is one disability. Parental inquiry as to how to address their child's impairment, such as SI, can be confusing.

Documentation

This material used for this literature review has been assembled from many resources, such as scholarly journals, peer-reviewed articles, textbooks, educational magazines, organizational websites, and public law. Multiple Northcentral University library database searches were conducted including those using the terms: developmental disabilities, speech impairments, autism spectrum disorder, support groups, speech pathology, on-line support groups, parental wellbeing, parent reinforced therapy, storybook reading, information and communication technology (ICT), grief, and coping. Searches were also concentrated on people important in the field and related areas such as: Margaret Glogowska, Laura Justice, Betty Hart, Todd Risley, David Luterman, and Dale E. Brashers. Internet searches were also performed using these same terms. Much of the information for this literature review has been found in the following journals: *Language, Speech and Hearing Services in Schools, Journal of Autism and Developmental Disorders, Journal of Intellectual Disability Research, International Journal of Language and Communication Disorders, Topics in Early Childhood Special Education, Research in Autism Spectrum Disorders, Journal of Speech, Language, and Hearing Research, American Journal of Speech-Language Pathology, Journal of Medical Internet Research, International Journal of Pediatric Otorhinolaryngology, Psychology in Schools, Journal of Communication Disorders, Journal of Cranio-Maxillo-Facial Surgery, American Journal of Audiology, and Communication Disorders Quarterly.* In an effort to locate current information about the aforementioned topics by the important people identified or reflections of their theories a dedicated search was made through the last five years of the afore listed journals' archives in case timely articles were missed in earlier searches. The articles reported on in this literature review appear to be the most seminal or current in regards to the dissertation subject.

Theoretical Framework

The theoretical framework of this qualitative multiple case study emerged from the review of both the literature and Internet resources and guided the researcher in examining five variables. The variables presented here are in hierarchical order with each one building on the previous variable. The five variables are: (1) being a parent of a child with the disability of SI could be stressful; (2) parents of children with disabilities have been helped by joining groups for support; (3) support groups can be facilitated online; (4) there are online support groups for parents of children with various disabilities; and, (5) however, an Internet search did not locate an interactive online support groups (OSG) for parents of children with SI.

Safeguarding Educational Needs

The right to a free and appropriate public education (FAPE) whether a child has a SI, DD, or another type of disability is safeguarded by legislation in the United States. The Individuals with Disabilities Act (IDEA, 2004) assures the educational needs of children are provided for free of charge no matter what the disability. Compulsory offering of education for children with handicaps is relatively recent in the United States. This mandate commenced with the passage of the Education for All Handicapped Children's Act of 1975 also known as Public Law 94-142 (PL94-142) as it was the 142nd issuance of the 94th United States Congress. Prior to the passage of this public law all special services for and education of disabled students was the purveyance of the states and there was no uniformity for these educational accommodations from state to state (US Department of Education, 2007). Oftentimes disabled children were wards in institutions. For example, in 1967, the incidence of disabled children in institutions was approximately 200,000. Today the majority of disabled students are educated in their neighborhood schools and efforts are made for them to attend classes at least a portion of the day with their non- disabled peers.

Reaction to Qualifying for Special Education

In 1969, Elisabeth Kübler-Ross transformed the field of counseling when she introduced her landmark book, *On Death and Dying* (Kellehear, 2014). Kübler-Ross demarcated the stages of grief experienced by those dealing with their own or a loved one's demise as: denial, anger, bargaining, depression, and acceptance. With the passage of time practitioners in other areas of social sciences became cognizant of the possibility those dealing with adversity in their fields may also transition through these stages (Haley et al., 2013).

Haley et al. (2013) interviewed 276 parents as to their reactions when learning their preschool or elementary school child qualification for special education. Except for bargaining all of the other stages of grief reported by Kübler-Ross (Kellehear, 2014) were represented in the parents' responses to the semi-structured interviews: denial, anger, depression, and acceptance. Oftentimes parental denial centered around the disbelief their child had a disability to the extent he would need special education. The anger was frequently aimed at the teaching staff with the feelings if the teachers had tried harder their child would not have been so far behind his peers. Parent depression sprang from the knowledge their child was not on the same intellectual and/or functional footing as his peers and may never be on level. Finally, the parents did experience acceptance with time when they acknowledged their child needed help. Interestingly Gath (1979) used almost the same words to describe parents' reaction to the revelation their child would require special education when she wrote: "To many it is a crisis, producing grief followed by stages of shock, denial, anger, adaptation and reorganization" (p. 161).

Types of Disabilities

Children with a multitude of disabilities are served in school districts. These disabilities can range from physical to functional to intellectual in nature. The federal government defines several types of disabilities.

Federal government definitions. According to the Code of Federal Regulations governing Individuals with Disabilities Education Act of 2004 (IDEA) a:

> Child with a disability means a child evaluated in accordance with Sec. 300.304 through 300.311 as having mental retardation, a hearing impairment (including deafness), a speech or language impairment, a visual impairment (including blindness), a serious emotional disturbance (referred to in this part as "emotional disturbance"), an orthopedic impairment, autism, traumatic brain injury, other health impairment, a specific learning disability, deaf-blindness, or multiple disabilities, and who, by reason thereof, needs special education and related services.

Developmental delays. Defining what constitutes a DD can present a dilemma. While the federal government enumerates the actual categories, a DD can fall under in order to be served by school districts the criterion for the qualification of a DD is up to the discretion of the state (Brassard & Boehm, 2014).

Batshaw, Roizen, and Lotrecchaiano (2014) identified the presence of a developmental delay as the inability of a child to meet age-appropriate milestones. These developmental delays may be the result of multiple factors. The etiology of the DD may be genetic in origin as found in such syndromes as Down, Williams, and Turner. A DD may be physical or cognitive in nature. Neurological damage may be the culprit in some DDs such as the class of insult at birth often resulting in cerebral palsy. In very young children the disability is assessed for how it affects five key areas: cognition; communication; motor skills; self-help or adaptive skills; and, social and emotional development (Brassard & Boehm, 2014).

Speech Impairment

One area of special education is speech therapy, which specializes in the treatment of a communicative DD or a SI. A recent meta-analysis indicates that 5.0% of U. S. children have SI (Sonik et al., 2017). The 2004 reauthorization of PL 94-142, which is entitled the Individuals with Disabilities Education Act (IDEA), defines a speech impairment as a “communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance” (34 CFR, §300.8 [c] [11]).

The goal of speech therapy is to remediate SIs such as receptive and expressive language disorders. In *The Handbook of Language and Speech Disorders,* Gillam and Kamhi (2012) defined a specific language impairment (SLI) as “a condition in which children experience significant language learning difficulties in the absence of substantial cognitive, hearing, oral-motor, emotional, or environmental deficits” (p. 210). There are multiple speech and language diagnosis which can affect children but the majority are contained in the following four: articulation- incorrect production of speech sounds; fluency- a disruption of the flow of speech, which is also known as stuttering; voice- an abnormal vocal quality as to pitch, resonance, or loudness; and, language- difficulty in expressing or understanding verbal thoughts and ideas (Center for Parent Information and Resources, 2014). Speech-language pathologists (SLPs) diagnose and treat communication impairments and swallowing disorders in patients, which may result from various causes, including brain injury, developmental delay, or a cleft palate. SLPs hold at least a master’s degree, have completed 400 hours of supervised practicum as well as a fellowship, passed a national board, and hold a Certificate of Clinical Competence (CCC) from ASHA. ASHA identifies the following support personnel who assist speech-language pathologists in providing services: speech-language pathology assistant (SLPA), paraprofessional, speech aide, therapy assistant, and communication aide (ASHA, n. d. c).

When a child fails to reach developmental communication milestones parents may become concerned (ASHA, n. d. b.). ASHA has developed guidelines for parents in regard to milestones in spoken language. Between birth and three months, an infant uses differentiated cries for different needs and may be making sounds to indicate pleasure. ASHA included in their publication the following milestones in spoken language. ASHA noted during the next three months the listener can pick up distinct sounds imbedded in a baby's babbling particularly sounds made in the front of the mouth such as /p/, /b/, and /m/. The baby is also laughing when pleased and indicating unhappiness verbally. By one year of age he is using gestures to communicate such as waving, has repetitive babbling such as 'baba', and may say one or two words which might be difficult to understand. At two he may have begun to combine some of his ever-growing vocabulary into two-word utterances. By the time the child is three he has a label for many things and people in his environment. He speaks in two- to three-word utterances. His phonemic repertoire has expanded to include /k/, /g/, /f/, /t/, /d/, and /n/. Also, by two he may be trying to make sense of his world by constantly querying "why". Occasional stuttering is not a cause for concern. This intermittent dysfluency is thought to be the result of an in congruency of the young child's effort to express himself to others and not have yet developed an adequate vocabulary to do so. People who know him well generally understand him, but strangers may find his speech unintelligible. At four he is asking and answering 'wh' questions such as "where?" and "who?" He enjoys relating his experiences often in up to four sentences at a time which each may consist of four words and are understandable to most listeners. He is beginning to be able to rhyme words. He uses some pronouns and plurals. By the time he is ready for kindergarten at age five, he may be saying all the speech sounds but the later developing ones such as /l/, /s/, /r/, /v/, /z/, /ch/, /sh/, /th/ may not be pronounced correctly. He can tell a short story and actively participate in a conversation. Missing these milestones by a significant amount of time is a warning for a parent to consult their physician or a SLP to determine if there is a SI.

Speech therapy services in public schools have been around for about 120 years. In 1895 Dr. Edward Hartwell, Boston school district director of physical training, created a speech correction class in the Boston school district (Duchan, 2010). In 1910 Etta Sellik Reed opened a facility in Detroit which is believed to be the first school devoted to the treatment of speech impairments. It was the Reed School for Nervous and Backward Children and the Correction of Defective Speech. Reed established the institution in memory of her husband, Frank Reed, who treated himself to control his stuttering. In larger cities, the newly compulsory public schools offered speech correction classes generally staffed by normal teachers with the help of such texts as *First Lessons in Speech Improvement* (Birmingham & Krapp, 1922) and *Speech Defects in School Children and How to Treat Them* (Swift, 1918).

The first formal speech therapy classes for practitioners of speech remediation were taught at the University of Wisconsin in Madison in 1914 by Smiley Blanton. Causes of speech difficulties were often thought to be the results of weaknesses on the part of the speech impaired individual. For example, the etiology of stuttering was thought to be nervousness on the part of the sufferer.

Some of the early treatments persist to this day such as articulatory drills for mispronounced sounds. There were three delivery services models in these initial therapeutic settings (Duchan, 2010). One delivery model was through boarding schools which were developed solely for children with SIs, typically for stutterers. In day schools, there were self-contained classes which were taught by a speech specialist in which all of the children had SIs. Also, in day schools was the third type of delivery model. These were staffed by itinerant teachers who traveled from school to school and serviced children with SIs. This is the model which largely exists today.

One reason the creation an individual educational plan for each child is so important is that there are so many unique types of disabilities which all have to be handled differently. A student may be seen for an orthopedic disability such as cerebral palsy or an emotional problem such as bipolar. The services for the aforementioned students will be different from a child with a developmental delay, speech impairment, or autism spectrum disorder.

Autism Spectrum Disorder

A discussion about autism spectrum disorder (ASD) is appropriate in a paper primarily about SIs. There exists a strong relationship between the two. Bennett et al. (2014) observed one of the qualifying criteria set forth by the American Psychiatric Association (APA) for ASD is a communication delay. Therefore, all very young child with ASD will have a SI but not all very young children with SI will have ASD.

In 2013, the APA published the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (Bennett et al., 2014). Included in this new edition was a change in the parameters by which autism is diagnosed. Previously there were sub-diagnoses of autism which are no longer included. One sub-diagnosis was Asperger's syndrome which is characterized by social deficits in communication. Another sub-diagnosis was pervasive developmental disorder. This diagnosis was used when very young children demonstrated autistic-like tendencies, but evaluators were hesitant to label them autistic. A third diagnosis was childhood disintegrative disorder. A hallmark of this disorder was the child was experiencing normal development but suddenly lost the skills which he had learned. A diagnosis, which no longer falls under the label of autism, was Rett syndrome. Rett syndrome continues to be a valid diagnosis. However, its categorization has changed. This syndrome mainly affects females. The child presents with compulsive hand clapping, hand ringing, or hand to mouth behavior. Because of the repetitive nature of the hand action Rett syndrome was classified as autism. However, now it is believed Rett syndrome's etiology is the result of a defect of the grey matter of the brain and not a sub-diagnosis of autism. The DSM-5 recognizes only autism spectrum disorder (ASD). Sub-classifications are no longer recognized and criteria for ASD are more stringent. A new diagnosis, social communication disorder (SCD), now encompasses some of the former Asperger's qualifiers. It is a diagnosis for individuals who are extremely weak in social communication, pragmatics of speech, but do not exhibit the repetitive behaviors necessary to qualify as ASD. Interestingly some individuals who were labeled as autistic before the adoption of DSM-5 no longer meet the criteria.

Challenges Specific to Disorders or Impairments

There is a great deal of overlap in the challenge's parents face in dealing with all of the aforementioned handicapping conditions- DD, SI, and ASD- such as finding information about the disability and planning for the future of their child.

Conversely, there exist challenges germane to each type only. For example, there may come a time in some children's lives in which they no longer have their disability. The issues that led to the diagnosis of DD or SI may be resolved. However, ASD is pervasive and the individual will always have this disability.

Developmental disability. Some of the various challenges, oftentimes lasting for decades, which parents of children with DD may encounter include: locating health and educational resources; finding financial resources; and, concerns about their child's adulthood in the areas of vocation and residential challenges (Glidden & Natcher, 2009). Another challenge is the result of a lack of handicapping qualifying uniformity. A child may qualify as having a DD in one state and move to another where he may not qualify (Brassard & Boehm, 2014).

Speech impairment. Of considerable anxiety provocation for parents of children with a SI is the difficulty they may have getting financial coverage for their child's speech therapy services if they have private health insurance. A policy may cover therapy for one kind of condition but not therapy for a SI of a different etiology (ASHA, n. d. a). The speech therapy for children who qualify for Medicaid is more frequently covered that the therapy for children with private insurance.

Parents of children with SI face unique challenges in seeking means to facilitate the improved communication skills of their offspring. Glogowska (2002) reported on the isolation and fear parents of young children with SIs experience. These parents shared their private emotions when they spoke to her and her team of researchers. They join a host of other parents of children with DDs in struggling to find the specific care and special education their child needs when they are given these diagnoses. McLeod et al. (2013) noted some communication disordered children who do not received speech therapy intervention prior to beginning school may continue to have difficulties with speech up to 28 years past the optimum time for them to start with correction.

Autism spectrum disorder. Those with ASD do have documented deficits in communication (APA, 2013). This communication disorder may be verbal, nonverbal, or a combination of the two. Verbal difficulties may range from an absence of verbalizations to delayed onset of speech. The communication disorder may also include difficulty with conversational speech (Mohd Roffeei, Abdullah, & Basar, 2015). The difficulties with social communication may also be non-verbal. For example, the autistic child may not understand the conventions or pragmatics of speech such as maintaining eye contact while speaking. The child may misunderstand what is being said, having particular difficulty with figurative language.

However, the diagnosis is not made on communication deficits alone. The autistic child will have other signs and symptoms such as an over dependence on routines, difficulty adapting to change, and/or over sensitivity to sensory input such as textures and smells. The child may also give obsessive attention to objects in his environment. The term spectrum is used in the diagnosis to indicate the intensity of this disorder can range from mild to severe in nature.

Specifics about speech impairments.

There are some factors which make SI unique among other impairments and disabilities. There are elements which are not only painful to the child but may also influence the behaviors of others as is the case in dysfluencies also known as stuttering (ASHA, 2012; Blood et al., 2011). In other cases, the presence of the SI will be the cause of parental depression particularly maternal depression (Maggio et al., 2014). In some instances, troubling behavior actually causes the SI (Krohling, de Pula, & Behlau, 2015).

Bullying and speech impairments. Students who stutter may be the object of bullying (Blood et al, 2011). The bullying may result in loss of self-esteem, anxiety, and avoidance behaviors. Stutterers are 61% more likely to be targeted for bullying than their non-stuttering peers (ASHA, 2012).

The role of behavior in the causation of functional hoarseness. Speaking loudly in childhood is not unusual. However, speaking loudly so regularly and with such intensity as to cause damage to the vocal folds is unusual. This phenomenon is called phonotrauma (Krohling et al., 2015). Phonotrauma has a high correlation to certain behaviors such as seeking attention during conversation, loss of sleep, aggressiveness, and agitation. The result of the phonotrauma can be a hoarse vocal quality or in some cases it can be severe to the point the vocal folds are so swollen there is no audible voice. This condition is also known as aphonia. This type of behavior can also lead to vocal nodules.

Other behavioral manifestations and speech impairments. The comorbidity of language impairments and behavioral problems may exist because of the frustration a child experiences in order to get his wants and needs known. Maggio et al. (2014) found a high frequency of preschool children with SIs in the areas of expressive and expressive/receptive language disorders were also withdrawn. Older children with the same diagnosis tended to be anxious and depressed. Gregl et al. (2014) found it was not the inability to express themselves rather the inability to understand what was being said to the child, a receptive language disorder, which lead to the comorbidity of symptoms of Attention Deficit Hyperactivity Disorder (ADHD).

Language Development

Several twentieth century linguists contributed to the theoretical basis of the acquisition of language during early childhood (Bloom, 1973; Brown, 1973; Cherry, 2016; Chomsky, 1985, 2006; Goddard, 2015; Piaget, 1926; Snow, 1983; Vygotsky, 1986). Prominent among these theorists were Jean Piaget, Lev Semyonovich Vygotsky, Noam Chomsky, and Catherine Snow.

Jean Piaget. Among a host of interests pursued by psychologist, Jean Piaget, was the development of language in young children. Piaget developed his theories about language acquisition by studying his own children (Smith, 2000) and through a series of experiments (Piaget, 1926). Piaget delineated several discrete phrases of language development. A child first launched into an echolalic stage during which he relied on attempts to repeat what he heard others say. When he became more proficient in his speech the child began to speak on topic of his own interests. These monologues were indicative of his egocentric nature. He and his adjacent peers then went through a stage in which they spoke on the same topic. However, they were not speaking together but rather in what he called a *dual or collective monologue.* From these egocentric attempts at language the child graduated to socialized speech, through which he shared information, questioned and criticized others, and made requests.

Lev Semyonovich Vygotsky. Lev Semyonovich Vygotsky was a Russian psychologist who studied the influence of social interactions on children's learning in many areas including language development (Cherry, 2016). Where Piaget was interested in the intent of a child's language Vygotsky was interested in the meaning of the child's language. Vygotsky believed there existed two planes of the child's language: the external plane was what the listener heard, and the internal plane was where the meaning of the utterance was constructed (Vygotsky, 1986). Vygotsky held word meaning was not static rather it developed and changed as the child developed and changed.

Noam Chomsky. Noam Chomsky, a Harvard trained linguist and MIT professor, felt that children had a natural innate sense of grammar (Goddard, 2015). Chomsky (1985, 2006) employed the term transformational grammar which means that an utterance may have multiple levels of meaning. Take for example a child saying “ball”. This utterance has a *surface* meaning—the identification of the object, ball. But it can also have an alternative meaning. It might mean “Give me the ball”, “That is a ball”, or perhaps “Look at the ball”. This level of meaning, which the listener must discern from contextual factors, is the *deep* level of meaning.

Catherine Snow. Catherine Snow is a Harvard University professor. Her areas of academic interest include not only early language acquisition but also the language development of bilingual children and how language acquisition affects literacy skills (President and fellows of Harvard College, 2016). Snow (1983) wrote about the concept of semantic contingency as an integral factor in the acquisition of language in young children. To explain this semantic contingency Snow first declared that one the best ways to facilitate child language development was to take the child’s own utterances, edit them, and then re-expose the child to them. She concluded there are four semantic contingency techniques: (1) expansion- the adult enriches what the child says by providing more information about it; (2) semantic extension- the adult defines a word the child uses; (3) clarifying questions- the adult asks the child to provide further information about an utterance; (4) and, answering a child’s questions. None of these four techniques would work without responsiveness on the part of the parent. The antithesis of semantic contingency occurs when the adult changes or ignores a topic, which has been introduced by the child. The more frequently this type of topic change or ignoring of a subject of child interest occurs the greater the negative impact on the child's language development.

Typical Language Development

Bloom (1973) and Brown (1973) both conducted qualitative research examining extensive audio-taped samples of very young children's developing speech. Bloom (1973) studied transcriptions of her daughter's speech. Brown (1973) and his colleagues studied the same type of artifacts of three children pseudonymously identified as "Adam," "Eve," and "Sarah." What emerged from their studies was a hierarchal mapping of the attainment of discrete parts of speech in the typically developing language of young children. For example, of early linguistic progress is the acquisition of labeling objects and people, or nouns, in the child's environment (e. g. dog). The next step frequently is the development of an action words, or verbs, to pair with the vocabulary of nouns that are already in the child's repertoire (e. g., dog run). This pairing results in what Brown (1973) referred to as the 'kernel sentence' or the underpinning of a more sophisticated utterance. The child's utterances evolve, becoming richer with the addition of descriptive words such as adjectives (e. g., brown dog run).

Bloom (1973) disagreed with Chomsky's notion of a natural innate sense of grammar. She felt that the child had to either learn through experimentation with grammatical forms when they began using multi-word utterances or be taught grammatical forms. However, when they were at the one-word stage of utterances they did not have a natural and innate sense of grammar as Chomsky believed.

The study of typical language acquisition, such as in the works of Bloom (1973) and Brown (1973) is vital for SLP. These characteristic patterns serve as sorts of roadmaps to guide the SLP in facilitating a remediation approach that mirrors the naturalistic path of language acquisition when working with non-verbal or language delayed young clients.

Atypical Language Development

Language is learned through an intimate verbal relationship between an adult and a child (Fielding-Barnsley & Hay, 2012; Grimaldi, 2012; Hart & Risley, 1995, 1999, 2003; Suskind et al., 2013; Vernon-Feagans, Garrett-Peters, Willoughby, Mills-Koonce, & The Family Life Project Key Investigators, 2012). The adult provides a myriad of verbal utterances for the child to imitate. The child attempts his own utterance. The adult takes the child's utterance, corrects errors, and models an accurate utterance. This activity is cyclical in nature, with the child then attempting to imitate the parent's new model and the parent refining the child's effort. An interested adult is one of the essential elements of this exchange for a child's language development (Sillers & Sigman, 2002). However, conversely when an important part of this verbal give-and-take is missing, the child's language development may suffer. According to Fielding-Barnsley and Hay (2012), children from low socioeconomic (SES) homes are exposed to a significantly diminished amount of utterances compared to their middle and upper SES counterparts. Fielding-Barnsley and Hay (2012) revealed this troubling statistic- by the time a child from a low SES family reaches the age of four he will have been exposed to an average of 12 million utterances while a child from a higher SES family will be exposed to an average of 44 million utterances, almost four times more. Vernon-Feagans et al. (2012) offered a possible explanation for this dearth of adult utterances. They stated poverty can cause such lack of structure in the home environment the communication between parent and child may be lost among the chaos.

Hart and Risley (1995, 1999, 2003) also witnessed the phenomenon chronicled by Fielding-Barnsley and Hay (2012) - the inequity of verbalizations between varying levels of SES homes. As a graduate student at the University of Kansas, Betty Hart was in charge of a preschool for low SES students. She acknowledged many of her charges demonstrated poor language skills and sought to expand them through specific semantic improvement exercises including special field trips with lessons first highlighting novel vocabulary that would be germane to the trip. Hart was pleased with the improvement of their speech until she became cognizant of two realities. The first was that the language improvement did not prove to be permanent. Hart and her mentor, Todd Risley, sadly noted although there was an increase in vocabulary at first "our results, promising at the start, washed out fairly early and fairly completely as children aged" (Hart & Risley, 2003, p. 1). The second reality occurred to Hart after she had an opportunity to interact with the children of faculty who attended the university's lab school. She was struck as to how different their speech was. The professors' children's utterances were more complex and their vocabulary richer. Hart decided the intervention she was attempting was too late and she needed to study the impetus of her charges' communication lag. She resolved to observe children when they first started to talk in the home. Hart and Risley devised a study to determine what differences existed from one child's home to another which would influence their language development from age seven months until three years of age. Hart and Risley were not only interested in the language the children were using but also the language which was spoken to the child. Hart, Risley, and their assistants went monthly for two and a half years to recorded one-hour samples of the interactions between parents and their children starting at age seven months. The 42 families in the study included a wide range of SES from welfare parents, middle class, and university professors. It took three more years to analyze the data.

Hart and Risley (1995, 1999) found children from the welfare group had a repertoire of fewer words than the other two group, particularly the professors' children, and accumulated new words at a slower pace than the other two groups. Hart and Risley (1995, 1999) found this phenomenon was in direct correlation to how many words they were exposed to in their home environment. Children in homes supported by welfare were exposed to 30 million fewer words by the age of three than those of children in homes with professional parents. Interestingly, the researchers were able to locate 29 of the original 42 subjects when they were in the third grade and the same pattern of vocabulary acquisition persisted (Hart& Risley, 2003).

Pediatric surgeon, specializing in cochlear implants, Suskind, has brought Hart and Risley's work into the twenty first century (Suskind et al. 2013). Utilizing her computer software program, Language ENvironment Analysis (LENA), Suskind et al. (2013) compressed the analysis of data, the actual recordings of dialogue between young test subjects and their caregivers, which took the earlier researchers five- and one-half years to record and analyze into mere hours. A recording can be made of an adult and young child's verbal interaction, run through LENA, and recommendations made to improve the interaction all in the same setting.

Coping Mechanisms

When a child receives a diagnosis, which will necessitate special education services an emotional upheaval for the parents can ensue. A qualitative study by Bingham, Correa, and Humber (2012) chronicled six mother's reactions to their child's diagnosis of DD. As coping mechanisms, every one of the mothers utilized seeking information as well as spiritual support. Folkman and Lazarus (1988) reported the coping strategies which parents adopt to deal with these problems fall into two main categories: problem-focused and emotion-focused. Folkman and Lazarus (1988) found parents who utilized emotion-focused coping strategies such as avoidance, escape, and denial of their child's DD experienced greater negative adjustment outcomes. In contrast, Glidden, Billings, and Jobe (2006) discovered more positive adjustment outcomes resulted when parents employed problem-solving strategies such as Seeking Social Support and Planful Problem Solving as measured by the Ways of Coping (WOC) Scales (Folkman & Lazarus, 2005). Six other strategies employed by parents besides Seeking Social Support and Planful Problem Solving which Folkman and Lazarus (2005) catalogued included: Distancing; Self-Control; Accepting Responsibility; Escape-Avoidance; and, Positive Reappraisal. Positive adjustment coping techniques resulted in lower levels of depression and higher levels of subjective well-being (SWB).

The type of approach to coping a family will utilize often depends upon the type of grief they are dealing with (Frieche, Bloedow, & Hesse, 2003). The diagnosis of a chronic condition will be dealt with differently than a death. Frieche et al. (2003) described the difference between a stage grief and an episodic grief. A stage grief is the result of a finite event such as a death, even though it may take a great deal of time to come to grips with it, but an episodic grief such as parenting a child with a SI continues. Upon the diagnosis of a child's SI the parent may experience episodic grief. The parent must deal with the loss of a "flawless" child (Frieche et al., 2003) who may have been envisioned as the incarnation of the parent.

Aras et al. (2014) studied a group of parents of a heterogeneous group of children having either a hearing impairment or a mixed expressive/receptive language disorder. This group of parents was found to have a lower health related quality of life as measured by physical functioning, bodily pain, social functioning, and emotional well-being as well as general health, energy-vitality, and mental health than of parents of normally developing children. This impaired quality of life is important to consider as parental health is a cofactor in the overall development of children. Luterman (2017) stated some parents are so overwhelmed by their child's SI they begin to ignore their own needs.

A lack of the ability to communicate may lead to emotional/behavioral difficulties (Breznitz & Sherman, 1987; Gregl et al., 2014; Lindsay, Dockrell, & Strand, 2007; Maggio et al., 2014; Rudolph, Rosanowski, Eysholdt, & Kummer, 2003). Lindsay et al. (2007) specifically focused on the behavioral, emotional, and social difficulties (BESD) of children with specific speech and language difficulties (SSLD). Lindsay et al. (2007) stated SSLD and SLI (Gillam & Kamhi,2012) can be used interchangeably. They were able to confirm comorbidity between children with SSLD and BESD. The incidence of BESD was higher in the SSLD population than in a normally developing population. These behavior problems were judged to be an additional source of stress for the parent. Conversely, it may not just be the children who cannot express themselves. Rudolph et al. (2003) studied 100 German mothers of children with a SI in order to determine the incidence of depression. None of the children of these mothers had a comorbid factor of a cochlear implant, syndrome, or other DD. This condition was put into place so the researchers were only looking at the effect of a stand-alone SI on the emotional well-being of the parent. Depression was chosen as the focus of the Rudolph et al. study, along with anxiety, as it is the most prevalent mental disorder in adults and effects more women than men. The otherwise healthy women, who were parents of children diagnosed with SIs, presented with an 11% incidence of depression as compared to the 2.5% incidence of the mothers of normally developing children in the control group (Rudolph et al., 2003).

Multiple factors may compound a mother's depression upon learning about her child's SI. Facilitating treatment such as seeking funds and therapy may cause her to neglect other aspects of her life. The uncertainty of the outcome of the treatment may also be a source of melancholy. She may even experience some censure from those around as they blame her for being the cause of the SI or the child's lack of progress in therapy (Rudolph et al., 2003). Coincidently the depression Rudolph et al. (2003) found may cause mothers to talk less to their young child (Breznitz & Sherman, 1987). Schultz, Reynolds, and Sontag-Padilla (2013) opined when depressed mothers did not speak as frequently to their children as non-depressed mothers did the essential 'serve and return' of communication to facilitate language development was absent.

The mental strain of chronic depression as well guilt caused by the diagnosis of a SI will negatively impact parents (Allen & Babin, 2013; Jacks & Robin, 2012). Allen and Babin (2013) referenced guilt as a possible emotion experienced by a parent of a child with childhood apraxia of speech (CAS). In *The Handbook of Language and Speech Disorders,* Jacks and Robin (2012) defined apraxia as a "genetically transmitted complex neurodevelopmental form or an idiopathic disorder with no clearly identified genetic cause or neurological abnormalities" (p. 391). Allen and Babin (2013) went further to explain little has been done to report the effects of CAS on a family's wellbeing. Because of the severe nature of the disorder the family's involvement will be both long and intense. While children with CAS may eventually have intelligible speech after extensive therapy their quality of speech initially will be significantly impaired. Family dynamics may suffer if members feel an unfair share of common resources is being directed to the child with CAS. Allen and Babin (2013) stated one of the main reasons for parental depression of children with CAS is the etiology of the condition is nebulous. Consequently, the parents ponder if they are to blame for the condition, not having any solid facts by which the cause can be assigned.

Judge (1998) spoke about self-blame as well as the negative impact it has on parents' social well-being. Judge (1998) observed whether the coping method of the parent is negative or positive it will predict how the family with deal with adversity. Judge revealed when parents felt they had the strength to confront and defeat hardships, the entire family benefited. Positive steps such as setting a strategic plan to deal with a child's disability illustrated their strength. However, Judge found when the parent adopted negative strategies such as self-blame and wishful thinking the hardiness of the family suffered. She observed as an implication for practice SLPs should direct families to these kinds of emotional and informational social supports. However, these resources were scarce (Judge, 1998).

SLP's Historic Role as Counselors

During the preparation phase for a student who hopes to become a SLP a great deal of time and effort is spent on the essentials of therapeutic practice for the remediation of communication disorders (Rollin, 2000). Building a sound foundation, the future SLP is taught about anatomy and physiology and the acquisition of normal language (Rollin, 2000). SLP students are taught multiple therapeutic approaches to cure many communication maladies. Then these future SLPs partake in rigorous supervised practicum. However, little time is spent preparing speech pathology candidates for one of their most important roles- the role of counselor (Friehe et al., 2007; Luterman, 1991; Rollin, 2000).

Luterman (1991) shared his strong feelings about the poor job professionals in the communication disorders field, by both audiologists and SLPs, historically have done in counseling their patients when he observed:

> As an aspiring audiologist in training, I learned that counseling was something one did after obtaining a careful case history and administering the diagnostic tests. Counseling was always information based and involved an explanation of an audiogram and recommendations for follow-through. I don’t recall if the graduate students were given an explicit injunction not to deal with the client’s feelings, but we behaved as though we were. If a client displayed feelings (e.g., by crying), we were to refer the client to the clinical psychologist. The message I received in my training program was that client affect was the province of social workers and psychologists and that counseling by audiologists and speech pathologists was to be information based (p. 1).

Friehe et al. (2007) reported while ASHA, the national governing speech pathology body, notes in its scope-of-practice guidelines for SLPs (2016) parent counseling is important, graduates are not well prepared to assume that task. Rollin (2000), while agreeing this is the directive of the national governing body, went on to state ironically there is a dearth of conferences and seminars sponsored by ASHA on this topic. Sadly, while it is apparent parents of children with speech impairments need emotional support, they might not get it from their child’s SLP.

Support Groups

A resource which parents might consider for help with securing information and resources for their child with a disability and themselves is a support group. Participation in a support group can fulfill many needs (Scott, 2012). The first support group as founded at Oxford University in England in 1908 by a group of

Christian athletes and students as a conduit of self-examination (Scott, 2012). A well-known support group founded in the 1930s that flourishes today is Alcoholics Anonymous (Scott, 2012). Membership in such groups can quell loneliness and provide social contact. The group can be an information conduit. Such assemblies also ease the suffering of victims of vicious crimes as well as those with a variety of medical and psychological conditions.

Parents of children with intellectual disabilities and autism have sought each other out since the 1970s (Singer et al., 2012). Seeking others who are experiencing similar problems for solace and information can be a way to relieve the grief and health concerns of parents of special education children in general and specifically speech impaired children.

Support groups can offer a safe place for those going through a difficult time in their lives. Participants may find fellowship, strategies to cope, and information (Pasold, Boateng, & Portilla, 2010). Some anxiety can be dispelled when parents are surrounded by the companionship of others who are experiencing similar difficulties with their own children (Connolly & Gersch, 2013). Clifford and Minnes (2013b) posited the creation of a support group is relatively easy to facilitate and is cost effective.

Van Uden-Krann et al. (2011) found only a minority of possibly qualifying participants joined support groups and therefore those who did not participate missed out on a valuable opportunity to mitigate their need for solace and information gathering. Van Uden-Krann et al. (2011) found in general participants who did join tended to be better educated, younger females who were in a higher income set than those who did not join a support group. The authors felt one deterrent to joining was support groups may be hard to find for otherwise interested parties. The small number of participants who do find a support group and subsequently join that group, do not always have positive reports. Dyregrov, Dyregrov, and Johnsen (2013) studied grief support groups in Norway. Dyregrov et al. (2013) stated participants' expectations and needs must be thoroughly studied and considered prior to organizing a group. The researchers found the leadership must be conversant in regards to the dynamics of support groups. If these factors are disregarded actual harm may come to the participants. The subjects in the Dyregrov et al. (2013) study all suffered the death of a significant person in their life, and subsequently were grieving. The primary negative complaint the subjects had was the illogical method by which leadership organized their particular group. It was the practice of one group, who had been together for a while, to accepted new members. Many felt these new members were not in the same stage of grief which caused difficulties for the group as a whole. Others were in groups where it was felt the causes of death of the loved ones were too diverse, such as a still birth as opposed to a motor vehicle accident, which caused disharmony for the group (Dyregrov, Dyregrov, & Johnsen, 2013).

Support Groups and Parents of Children with Developmental Delays

For parents of children with DD support groups can fulfill several needs (King, King, Rosenbaum, & Goffin, 1999). The support group membership can help the parents cope with their child's handicap and accompanying issues due to his disability. Parents can share experiences with each other. Through this sharing, some of the factors causing health problems for parents can be eliminated. More experienced families can alert newly diagnosed families about situations which await them and how to handle novel problems when they arise (King et al.,1999).

Thoughtful leadership and apposite organization, as compared to the Dyregrov et al. (2013) study, can lead to the constructive aspects of sharing information and dispensing hope with peers. There are multiple examples in the literature in which parents of children with a host of disorders experienced positive results from belonging to support groups. One area of important helpful results of group membership is the acquisition of knowledge. Pasold, Boateng, and Portilla (2010) reported on the outcomes of participation in a hospital-based support group whose mission was to disseminate information about eating disorders to parents. This hospital-based support group grew out a cadre of parents whose children were being treated at the Arkansas Children's Hospital who began talking with each other as they waited for their children to finish their various treatments for their eating disorders (Pasold et al., 2010). Pasold et al. discovered eventually staff professionals including psychologists and nutritionists joined the group. The researchers found the agenda of the group was driven by the needs of the group on any particular day.

The literature also offers a multitude of models for support groups devoted to a myriad of handicapping conditions. There are reports of support groups specific to autism (Banach & Course, 2012; Clifford & Minnes, 2013a, 2013b; Connolly & Gersch, 2013). There are other support groups devoted to the special challenges parents of disabled children face in light of their culture (Leung, Leung, and Fong, 2013; Mueller, Milian, & Lopez, 2009; Singer, Hornby, and Park, 2012). Singer et al. (2012) reported on a support group which relied on trained peers whose goal it is to reduce the anxiety and depression of Pacific Rim parents. Mueller et al. (2009) highlighted an assemblage whose objective it was to lessen the isolation of Latina mothers. The children of the parents in both of these groups were enrolled in special education. Feelings of well-being were improved with membership in such groups, such as the study cited by Leung et al. (2013) in which Chinese parents of special education students learned to deal with stress of raising children with special needs.

King et al. (1999) focused on the link between what they entitled as “family-centered” caregiving and as well as parental well-being. King, Rosenbaum, and King (1996), through their Measure of Processes of Care (MPOC) scales, defined elements of which ideal family-centered care consists: enabling and partnership, providing general information, providing specific information about the child, coordinated and comprehensive care for the child and family, and respectful and supportive care. The subjects of their study were parents of children with a non-progressive neurodevelopmental disorder (cerebral palsy, spina bifida, or hydrocephalus). These children were served at six rehabilitation centers in Ontario (King et al., 1996). King et al. (1996) found this type of caregiving led to parental satisfaction which in turn led to less stress. Some of these types of resources can be provided by support groups.

Luterman (2015) began a family-centered support group for parents of children with hearing loss at Emerson College which still exists today. Luterman (2015) stated that this model changes the parents’ status from sitting on the sidelines to becoming a key player in their child’s treatment. He added “our common sense tells us that family work allows us to extend our therapeutic reach into the lives of our clients” (p. 96).

Online Support Groups

Being able to interact in person is not always possible for members of a support group (Lemma & Fonagy, 2013; Oprescu et al., 2013). Distance may be a factor. Another factor, as Lemma and Fonagy (2013) discovered, is a participant’s psychological inability to work with others in close proximity. Limitations such as these can be circumvented by utilizing technology which allows participating in an online venue. The participants in Oprescu's et al.'s (2013) study contacted their peers through an online group to access emotional support and informational guidance needed due to their child's clubfoot.

Another form of online technology used to communicate is Facebook. Mohd Roffeei, Abdullah, and Basar (2015) employed this venue in order to analyze posts from two Malaysian autism support groups. To categorize the posts, the authors utilized the Social Support Behavior Code (SSBC), originated by Cutrona and Suhr (1992), a technique used to catalog parameters of support in the following classifications: informational, emotional, network, esteem, and tangible assistance. Mohd Roffeei et al., (2015) found posts representing each one of the SSBC categories when they analyzed 3637 messages from Facebook from members of these two groups.

Online Information Seeking

When parents are confronted by unfamiliar forces which effect their children, they may experience anxiety. According to the Uncertainty Management Theory (UMT) this anxiety or uncertainty can be assuaged or managed by information seeking (Brashers, 2001). Brashers (2001) suggested UMT lessened our anxiety in a time in history when "Constant surveillance of people's health, combined with improved methods for screening and monitoring, virtually guarantee finding something wrong with every person, creating a society divided into the chronically ill and the worried well (i.e., those waiting to be diagnosed)" (p. 477).

Similarly, Oprescu et al. (2013) stated:

> …in this context, both medical encounters and online support communities could be efficient as diffusion mechanisms for medical information. The online

> environment appears to offer excellent opportunities for health care professionals and health communication professionals to provide high-quality medical information to caregivers who are in information-seeking mode. The online environment also offers opportunities for innovative interdisciplinary research that can use information technology to bridge gaps between nursing, medicine, and health communication among others (Medical information section, para. 4).

Many physicians use information and communication technology (ICT) (Real & Street, 2009). ICT may include informational websites, communication portals, and online records. Real and Street (2009) reported in addition to enhancing the confidence the patient has in his or her health practitioner and the communication between them the coordination and implementation of care is enhanced. This communication venue may assist allied health providers, such as SLPs, as well as physicians. Real and Street (2009) view the implementation of the use of technology as significantly augmenting the relationship between doctors and patients.

Parental Importance in the Lives of Children with a SI

Family involvement in the therapeutic process of speech remediation is vital for several reasons. No SLP, not even one providing early childhood intervention (ECI) in the home, knows the range of communicative contexts in that home as well as the family. The home is the first place that the theories of Vygotsky, Chomsky, and Snow are put into practice (Cherry, 2016; Chomsky, 1985, 2006; Goddard, 2015; Snow,1983; Vygotsky, 1986). All four theorists (Piaget, Vygotsky, Chomsky, and Snow) believed that the nascent roots of receptive and expressive language development are initiated in the communicative interactions between caregivers and young children. The first place that these interactions occur for most is in their own home. Language should be taught in the context of the home or it will lack comprehensiveness of its meaning for the child (McKean, Phillips, & Thompson, 2012).

Prior to Education for All Handicapped Children's Act of 1975 the role of the parents of severely disabled children was different than it is today. Children with a handicap of a severe nature were frequently institutionalized with the implicit understanding the child's care should be left to the professionals. Here in the United States with the advent of 94-142 and with its reauthorization in 2004 (IDEA) parental participation became paramount. Parent involvement is so important that in the portion dictating the therapeutic services provided for children 0-3 years of age, Part C of IDEA, the venue specifically identified for services is the child's natural environment. This natural environment may be the home or daycare setting (IDEA, 2004). The parent is a vital member of the team creating the ECI plan of care entitled the Individualized Family Service Plan (IFSP). Similarly, in Great Britain the parent's opinion of the efficacy of therapy, because of dictates of the health system has been deemed of vital importance. The British system of health provision has made mandatory the seeking of parental input in regard to a child's care because it operates under an evidenced based care model (Glogwska & Campbell, 2000).

While the mandates regarding the treatment of SI children both in public schools in the United States and by the health care system in Britain are issued by the central governments of those two countries, the authority to regulate the therapeutic efforts of the educational system in Canada is held by the provinces. Beauregard (2011) reported in 1999 Quebec's educational governing entity, Ministère de l'Éducation du Québec, reiterated the dictates of its special education services to move to a more inclusive model. This meant wherever and whenever possible special education services, even speech therapy, be moved into the classroom setting. Another mandate was issued at the same time which was that public schools invite parents to become more involved in the special education of their child. Beauregard (2011) studied parents of students with dysphasia or what orthophonistes (term for Canadian speech therapists) labeled Primary Language Disorder [PLD]). This diagnosis appears to be an all-encompassing term for expressive and receptive language disorders. Beauregard (2011) noted research has confirmed the result of increased parental involvement in their children's schooling results in reduced absenteeism, higher self-esteem of their child as well as improved behaviors.

Other ways parents may help their SI child. Parents need to find the correct services for their SI child whether these services occur in a private speech therapy clinic or in a public school or a combination of the two. Parents also need to advocate for their SI child, such as attending IEP meetings to help determine that they are getting beneficial services. Carrying over skills learned in the speech therapy setting into the home is also important. McConkey (1979) encouraged this transfer of learning and performance. He believed home practice helped re-enforce what children garner from their speech therapy. This supplemental training assists students to generalize skills, whether initially learned at school or in a clinical situation, to other places besides solely in the therapy setting with the SLP.

Strengthening Parent/Professional Relationships

As observed by Haley et al. (2013), an innovative feature of IDEA was parents were designated as equal partners with the educational staff when planning for a disabled child's education. For too long had parents been relegated to a role of sitting on the sidelines when plans were being made for their child because the professionals knew best. Now they needed to be included in the formation of their child's individualized educational plan (IEP). Indeed, the intent of this act stated the IEP was a legally binding contract between the school and the parent as to the disbursement of services, modifications to the curriculum, and any accommodations their child would receive.

Special education. An educational area some opine could benefit from improved trust and communication is the relationship between parents of disabled students and those who work with these students at school. Mueller, Singer, and Draper (2008) studied parents' dissatisfaction with special education. The lessons they learned can be applied to speech therapy as this area of intervention falls within the public-school umbrella of special education. Mueller et al. (2008) studied parents of special education students from two school districts. Mueller et al. (2008) found these parents at times felt excluded by school staffs in the decision-making processes involved in their child's education. Smith, Romski, Sevcik, Adamson, and Bakemana (2011) also reported this dismissal of parental input by SLPs. They stated this disregard even happened during home-based therapy, which often occurred in the presence of the parent.

Glogowska and parents of speech impaired children. The current British system of health provision has made it mandatory for practitioners to seek parental input in regard to their child's care. British SLP, Margaret Glogowska, made a priority of finding out what parents felt about their children's communication deficits and the therapeutic procedures used to rectify these disorders (Glogowska, 1998, 2002; Glogowska & Campbell, 2000; Glogowska, Campbell, Peters, Roulstone, & Enderby, 2001). Glogowska (2002) had the belief her book, *A Time to Talk: Parents' Accounts of Children's Speech Difficulties,* was the first book of its kind in which narratives of parents' actually experiences and feelings dealing with their children's'

SI were reported. Prior to the publication of this book works on this topic were written by professionals in this area. Glogowska opined a book for parents of SI child essentially by parents of SI child, as it recounts interviews with them on a number of topics, would be beneficial for other parents in the same situation. Although the afore mentioned government mandate was in place during the time in which she was compiling this book her driving force did not appear to solely be for the purpose of satisfying that directive. Her interest in parental opinions appeared sincere when Glogowska said "It was clear that early speech and language delays were often poorly understood by parents, leading to feelings of isolation and fear when they encountered difficulties in their child's development of speech and language" (Glogowska, 2002, p. vii).

One of the most significant findings from Glogowska and her colleagues' inquiries (Glogowska & Campbell, 2000) was parents and SLPs often had vastly different impressions about children's speech. The parents' differing impressions were at times scientifically inaccurate. Romski, Sevick, Smith, Cheslock, and Bakemana (2011) opined SLPs should intentionally strive to discover what parents perceived about their child's speech and their ideas of the disorder's possible etiology in order to address any inaccuracies. If a parent and a SLP had such discussions negative factors, such as parental guilt, could be eliminated. For example, in some rural parts of Mexico mothers believe their child's cleft palate may be the result of an "evil eye" being placed on them and they carry feelings of culpability all of their lives for being the cause of their child's deformity. An educational discussion with a SLP could possibly rid the parent of this false notion.

Parent reinforced therapy. Gibbard and Smith (2016) cautioned the SIs of disadvantaged young children should be addressed as quickly as possible. Timing of the commencement of speech therapy for young children of poverty is critical because of the lack of language facilitation in some of their homes (Fielding-Barnsley & Hay, 2012; Hart & Risley, 1995, 1999, 2003; Vernon-Feagans et al., 2012). Gibbard and Smith (2016) opined the SIs of children from low SES homes have the potential to become exponentially worse than similar ones of children from middle or upper SES homes. This danger is related to the potential paucity of both reciprocal speech and adult utterances modeling semantic complexity and rich vocabulary (Hart and Risley,1995, 1999, 2003) in some low SES homes. This possible dearth of adequate communicative opportunities in some low SES homes contributes to the value of ECI speech-language services. The SLP may often be able to service the child’s SI at the same time he or she is modeling improved communication for the parent while therapy is conducted in the home.

Regardless of when therapy commences, in concurrence as a SLP is working to improve communication with a child he or she can also enlist the child’s mother and/or father in the task of reinforcing skills which have been learned in therapy (Fey, Cleave, Long, & Hughes, 1993; Roberts & Kaiser, 2011; Roberts, Kaiser, Oetting, & Hadley, 2012). Students only spend 15% of their time in school so it follows that they spend a great deal of time with their parents (Allen & Marshall, 2011). Although some authors feel that training parents to work with their speech impaired children at home is viable because of their proximity and the amount of time they spend with them (Roberts & Kaiser, 2011) Swift et al. (2016) state that the proof of efficacy in this area is lacking. Swift and her colleagues feel that SLPs have neglected this area of research. Roberts, Kaiser, Oetting, and Hadley (2012) set out to investigate positive and negative therapeutic effects of parental language intervention with children 18-60 months of age. The researchers found 18 peer reviewed articles on this topic. Seven language outcomes were evaluated: intervention; amount of parent training; number of home sessions; quantity of linguistic input; quality of linguistic input; responsiveness; and, support strategies. The results of the meta-analysis by Roberts et al. (2012) revealed: (a) interventions should focus on social communicative interactions between parents and children, (b) parents should be taught to increase their use of specific linguistic forms through models and expansions, (c) parents should be trained at home and across everyday routines, (d) parent-implemented interventions may be effective for children with a range of intellectual and language skills, and (e) training parents about once per week may be sufficient to improve child language outcomes. The authors found parents who received training interacted with their children to produce improved language skills of a quantity and quality superior to those who did not.

Fey, Cleave, Long, and Hughes (1993) discovered the impact of parent therapeutic intervention with children who are diagnosed to have communication disabilities had the potential to be significant. Fey et al. (1993) crafted a study in which a SLP administered a therapeutic treatment to a group of SI in the area of syntax (grammar) children. The experimental group was comprised of parents, who had been trained by this SLP and administered the same treatment to their own SI in the area of syntax children. Both groups presented with similar significant improvements in grammatical expression.

When working with parents of children who stutter, Reitzes (2014) stated parental involvement is not just advisable it is critical because of the nature of the problem. In the case of stuttering data collection outside of the therapy setting is important because it gives the treating SLP an idea of what is setting off the stuttering behaviors.

Günther and Hautvast (2010) have been proponents of parent reinforced therapy but with an additional caveat. Günther and Hautvast (2010) opined that to some degree along with the severity of the SI a factor that elucidates the enormous variations in the success of therapy is the initiative of the parent and the child to practice skills learned in therapy as homework. Günther and Hautvast (2010) examined the addition of contingency management (CM) as an enhancement of home practice. Contingency management (CM) is a behavioral therapy method which is used with multiple disciplines in cases such as with adult addiction. The basis of this technique consists of effecting change by rewarding chosen behaviors and ignoring undesirable behaviors. Rewards and their scheduled disbursement are decided ahead of time. Günther and Hautvast (2010) divided their subjects, who presented with articulation or pronunciation errors, into three groups. The first two groups received traditional articulation therapy (Van Riper & Erickson, 1995). A traditional approach to articulation therapy consists of remediating the production of a misarticulated sound or phoneme in prescribed sequential steps. Initially the phoneme is remediated in isolation. Correction continues on the word level in the initial, final, and medial positions, building to phrases, sentences, and finally spontaneous speech. The traditional therapy offered to the first two groups was fortified with homework assignments. The first group's homework assignments were rewarded with CM. The third group received no therapy. The first group did present with the greatest progress in the correct production of sounds. Günther and Hautvast (2010) concluded that a traditional approach to articulation therapy fortified with CM led to a faster resolution of the phoneme mispronunciation.

Bachner, Carmel, Lubetzky, Heinman, and Galil (2006) found the coping skills parents of SI children improved when they were involved in therapy. They opined that this improvement was due to two factors. One was the very act of being involved improved their emotions because they were no longer a bystander but were actively working to help their child. The second was that because while they were involved in the therapeutic process, they became more involved with the SLP and as a result felt the SLP cared about their wellbeing in addition to the welfare of their child.

Parents in a principal role in therapy delivery. Training parents of language delayed children in optimum communication facilitation techniques is vital. Researchers have found that some parents of SI children are not engaged in the type of communicative reciprocity that parents of normally developing children are for a variety of reasons (Allen & Marshall, 2011). Romero-Contreras (2015) observed the stigma of the diagnosis may cause some parents to avoid talking to their child. Multiple therapeutic programs have been developed in which the parent does not simply play a supportive role as a follow-up exercise monitor but is given a principal role in providing therapy (Allen & Marshall, 2011; Trajkovski et al., 2010).

Allen and Marshall (2011) utilized a technique entitled parent-child interaction therapy (PCIT) with school aged children who had specific language impairment (SLI) (Gillam & Kamhi, 2012). Like CM, PCIT was first utilized in fields other than speech-language pathology as a technique used for behavior management.

To employ PCIT a child is first videotaped speaking with his or her parent. The communication is analyzed for the presence of the following features that affect parent-child communication: (a) Is the parent responsive to the child; (b) Does the parent give too many directives to the child; (c) Is there evidence of turn taking between the parent and the child; (d) Does the parent understand the child’s message (semantic contingency); (e) What are the levels of semantic and syntactic complexity in the parent's speech; and, (f) Does the parent reinforce what the child says? If there is evidence of weakness in any of the above six discrete features a plan of intervention is created to modify the parent's behavior in order to facilitate improved communication with their child.

There exist at least four additional approaches, which are highly specific and scripted, to train parents to assume the key therapeutic role in their child's SI remediation: the Hanen Parent Program (HPP) (Baxendale & Hesketh, 2003; Girolametto, Greenberg, & Manolson, 1986) and Focused Playtime Intervention (FPI) (Siller, Hutman, & Sigman, 2013) were designed to improve language development and the Lidcombe (Swift et al., 2016; Trajkovski et al., 2010) and the Westmead Programs were conceived for dysfluency or stuttering control or reduction (Trajkovski et al., 2010).

The HPP (Baxendale & Hesketh, 2003; Girolametto et al., 1986) is based on four principals of dialogic skills that are honed between an adult and a typically developing child: (1) communicative intention and meaning is enhanced by the joint attention of the adult and child; (2) conversational turn taking allows a child to hear and then practice expressing the meaning of the exchange between the adult and child; (3) as the child's dialogic skills grow the adult communicates with him in increasingly complex syntactic and sematic linguistic constructions which in turn enriches his own utterances; and, (4) the elevation in the quality of the interaction between the adult and child both syntactically and semantically in turn increases the quantity of the interaction and the child learns linguist skills more rapidly.

FPI (Siller et al., 2013) is a very complex program that requires a great deal of commitment on the part of parents of language delayed children. In return for this commitment the parents receive a great deal of information and assistance. Initially they are schooled in language development. Then they are trained in therapy techniques specific for language development. Finally, they are also trained in data collection and interpretation to drive their therapeutic efforts. The authors (Siller et al., 2013) have reported positive results.

To utilize the Lidcombe program (Swift et al., 2016; Trajkovski et al., 2010) a SLP trains a parent to work very specifically with their child and to keep detailed data. The SLP models therapy for the parent and then intermittently observes the parent providing the therapy correcting and offering suggestions during its course. The Westmead program (Trajkovski et al., 2010), like the Lidcombe program, is primarily delivered by the parent after training. The parent teaches the child to speech in a purposeful, rhythmic pattern to lessen and control stuttering or dysfluencies of speech.

Efficacious Use of the Internet by SLPs

There is currently a shortage of SLPs (Furlong, Erickson, & Morris, 2017; Squires, 2013) and the demand for these professionals will only become greater in the next ten years as infants who would not have been viable a decade ago are born oftentimes with multiple handicaps and baby boomers approach their elder years (BLS, U.S. Department of Labor, 2014). Both of these groups at opposite ends of the age spectrum will present with disorders which will require the services of SLPs. In order to deal with these shortages SLPs will have to look increasingly to alternate venues for providing services and information. The Internet can be one of those venues. ASHA, the national governing speech pathology body, endorses the judicious use of telepractice in speech-language pathology (ASHA, 2005a).

Training parents to carry on the work of speech-language therapy (Fey et al., 1993; Roberts & Kaiser, 2011; Roberts et al., 2012) and the use of telepractice in speech-language pathology (Coufal, Parham, Jakubowitz, Howell, & Reyes, 2018) can be valuable. However, parent training can also be labor intensive and a telepractice set-up can be expensive. Teaching parents to facilitate improved language through storybook reading, which is the basis of Justice and her colleagues' research can be both efficient and effective (Guo et al., 2016; Justice, Logan, Işıtan, & Saçkes, 2016; Sawyer et al., 2014). Researchers have trained parents to use shared storybook reading as a type of language therapy reinforcement. This venture is one area well within the purview of parents. Besides the participation of an interested and trained adult the only other resource required is an appropriate book. A staple in many communities is a library which employs professionals who are skilled in assisting parents in making informed book selections.

A speech pathology dedicated website could not only offer training in this technique but also book choices such as the ones used by Lovelace and Stewart (2007) in their study. For example, Wood's *The Napping House* (1984) was used by Lovelace and Stewart (2007) to teach concepts of 'above' and 'below' and Mayer's *There's an Alligator Under my Bed* (1987) was used to teach the concepts of 'around' and 'through'. Embedded videos could be available on such a website for demonstrations of how to facilitate dialogue while reading books to young speech impaired children.

The very act of a parent and a child sharing a book is important (Farrant, 2012; Girolametto et al., 1986). Farrant (2012) observes joint attention between and adult and a child is extremely important for language development. Shared book reading in which the child's and parent's attention both is focused on a book and the accompanying verbiage is one of the best joint attention language activities available (Bojczyka, Davisb, & Ranab, 2016). Brannon and Dauksas (2012) found the incidence of book reading in lower SES homes is depressed. If lower SES families could be encouraged to read books to their children, it may go a long way in supplying some of the 30-million-word deficit that Hart and Risley discovered (1995).

Summary

When a child does not meet expected milestones, parents begin to suspect a DD. When the specific milestone the child is missing is speaking, then the parents might suspect the DD is either SI or ASD. The parents have two ways to address this concern. One is to assume a negative stance and either ignore it or downgrade its importance. The second way to deal with it is to confront it and seek information and help.

Accompanying a diagnosis of a condition which will eventually require some sort of remediation or special education, whether it is SI, ASD, or another DD, may come as a devastating blow for the parent. This initial shock may evolve over time into a physical illness or a psychological one such as depression.

Many parents of children receiving special education, in general, and specifically those who need speech remediation could benefit from some sort of aid, such as a support group. This group could be composed of parents who have already dealt with like issues and professionals, SLPs and physician such as family practitioners. If traveling to meet such a support group would be a problem, either because of distance or scheduling, then an online support group for parents of children with SI, such as those for parents of other children with problems such as eating disorders and Down syndrome, would be ideal. Such a site could give parents ideas as to securing therapy for their child, follow up activities to do at home, ideas how to fund the therapy, working with their public school in order to get assistance in that setting, medical resources in case the child has a medical condition which is causing the problem such as cleft palate.

Chapter 3: Research Method

Parents of children diagnosed with a speech impairment (SI) have explicit issues to deal with in their quest for the remediation of their child's communication difficulties. They have specific concerns, fears, and anxieties as well as questions regarding services available and possible home interventions. When parents are not informed, they seek information. This quelling of the anxiety by pursuing information is called Uncertainty Management Theory (UMT) (Brashers, 2009). The Internet is a popular place to initially seek information. One way to fortify parents of SI children could be through membership in an online support group. However, although such resources can be found for parents of children with other maladies such as clubfoot and eating disorders (Oprescu, Campo, Lowe, Andsager, & Morcuende, 2013; Sharifi et al., 2012) there is a dearth of such opportunities for parents of SI children.

The problem examined in this case study was a lack of social media in the form of online support groups (OSGs) offering opportunities of support services available for parents of (SI) children. Social media is unlike any other form of media as those partaking of it can interact with one another (Peters, Chen, Kaplan, Ognibeni, & Pauwels, 2013). With all of the evidence in the literature of powerful improvements in the socio-emotional status of patients and their families (Chung, 2013; Clifford & Minnes, 2013a; Kozlowski et al., 2014; Lemma & Fonagy, 2013; Leung et al., 2013; Patterson et al., 2013;) as well as information sharing via OSGs (Guo & Goh, 2014; Oprescu et al., 2013) one would assume this would be a popular venue for all parents of children with disabilities. A group of parents who seek each other out are mothers and fathers of children with Down syndrome via an OSG offering opportunities of support services (Down syndrome: Parents sharing, 2016).

This resource allows parents of Down syndrome children to reach out to ask and answer questions germane to the challenges they face in common. Experts in the field share important information. A similar website and OSG dedicated to parents of children with SI would be helpful to that population. However, a Bing search of February 25, 2018 revealed no such interactive OSG currently exists. Online sites may also be a conduit for information needed in order to provide the important parental reinforcement of skills which are garnered through speech therapy (Roberts & Kaiser, 2011; Trajkovski et al., 2010). These sites may improve relationships between speech-language pathologists (SLP) and parents, a relationship at times that can be strained due to the emotional nature of meeting the needs of the child (Smith et al., 2011). The impetus of the strain comes from several sources (Glogowska, 2002). The parent, already laboring under the burden of finding help and how to pay for it (ASHA, n. d. a), may feel that their contributions and concerns are not worthy of an SLP's time (Smith et al., 2011). A site that provides support for parents of children with SI could be a common meeting ground for both parties, these parents and SLPs.

The purpose of this qualitative multiple case study was to determine SLPs' and SLP students' perceptions of tools needed by parents to support their SI child which might be included in the development of an interactive OSG dedicated to speech therapy treatment and information sharing. The goal of this case study was to provide information needed to develop an OSG as a vehicle by which to form a partnership between SLPs and parents of SI children. For example, parents wishing to enhance their preschool child's expressive vocabulary may seek links to websites which contain directions for creating manipulatives or downloading worksheets which broaden their child's knowledge of basic concepts such as color words. The proposed interactive OSG could serve as a resource to find these materials. Another instance may be a parent needing resources in order to counsel their SI children who might be targets of bullies (Blood et al., 2011). A link to a website which could assist parents in this endeavor is *Bullies likelier to target students with speech-language disorders: Speech-language pathologists positioned to help,* which may be retrieved from http://www.asha.org/About/news/Press-Releases/2012/Bullies-Likelier-To-Target-Students-With-Speech-Language-Disorders.htm. Such a link could be included on this type of OSG.

Two specific groups comprised of purposefully selected research participants were units of analysis for this case study: (1) speech-language pathologists involved with the management and treatment of children with diagnosed speech impairments or suspected speech impairments; and, (2) speech-language pathology students. The two groups were located in the United States. One thousand postcards entitled "An invitation to participate in a speech-language pathology study" were sent to SLPs. This postcard had a description of the study (see Appendix A) and both a web address and a Quick Response (QR) code to link to the online questionnaire (see Appendix B), which was the data gathering vehicle for the study. Speech therapy personnel were invited to participate in the study resulting in a sample size of N=1000. The intent was to capture their perceptions of essential data based on their shared experiences to be included on a dedicated website devoted to speech therapy diagnoses and prognoses, general information, and reinforcement techniques of skills garnered through speech therapy.

This chapter includes the research methods and design, as well as descriptions of the research population, sample, materials and instruments, data collection, data processing and analysis, limitations and delimitations of the case study, and ethical assurances.

Research Methods and Design

Answers to the following research questions were sought to address the problem and purpose statements:

RQ1. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of service (e. g., screening, therapy, audiology, social support, and funding support)?

RQ2. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding coordinated service (e. g., co-located services and team coordination)?

RQ3. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding support from parents (e. g., organized through health services and through parents' groups)?

RQ4. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of information (e. g., therapy/resource options, prognostic guidance, and access to information)?

For this study, a qualitative multiple case study was selected as the most appropriate choice of method and design. The researcher allowed the central question of the case study to drive the research method, whether it be qualitative or quantitative (Shavelson & Towne, 2002). Glaser (2004), a researcher of renowned himself, stated that Guba and Lincoln (1981) caught the Qualitative Data Analysis (QDA) world's attention, with their tutelages:

> In situations where motives, attitudes, beliefs, and values direct much, if not most of human activity, the most sophisticated instrumentation we possess is still the careful observer—the human being who can watch, see, listen, question, probe, and finally analyze and organize his direct experience (p. 213).

Following the path blazed by these noted researchers in their quest for trustworthiness and truth in research the present multiple case study accessed authentic, credible research participants (those directly involved with providing support for children with SI) to gain in-depth and first hand understanding of the phenomenon at hand. The central question to have been answered by this case study was: What do speech therapy personnel involved with the treatment of children with diagnosed speech impairments or suspected speech impairments feel is essential to be included on a dedicated website devoted to speech therapy diagnoses and prognoses, general information, and reinforcement techniques of skills garnered through speech therapy? The opinions and perceptions of these stakeholders provided the non-numeric data that was analyzed in this case study.

There is a sharp divide between the two methodological approaches frequently used by researchers (Cozby & Bates, 2012). Quantitative researchers focus on behaviors that can be measured or counted. Qualitative researchers can explore natural occurring behaviors as well as subjects' reflections based on their perceptions and shared experiences, and reports of those behaviors.

One tool that a researcher may use in a qualitative study is the case study (Creswell, 2009; Stake, 2006; Yin, 2004). Yin (2004) stated that a case study is warranted if the following two conditions are met: (1) a *what* question is asked, satisfying Shavelson and Townes' (2002) dictate; and, (2) the researcher is looking for an understanding of the topic that is both intimate and comprehensive in order to answer the question he has posed. This proposed case study met both conditions as suggested by Yin. To meet the first condition, the central research question in this case study was interrogative- "what should be included on an interactive website for parents of speech impaired children?" To meet the second condition, a multiple case was selected over a single case. Yin (2004) suggested choosing a multiple case study if the phenomenon being studied is not "unique and idiosyncratic" (p. 10). Creswell (2009) described case studies as:

> a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals. Cases are bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time. (p. 13)

In addressing the second condition of Yin, answers to this inquiry is not elicited from a single case who provide similar perspectives from their vantage points, but rather from various cases (in this case study from two different groups from the field of speech pathology, professionals and students) who may provide differing perspectives from their different vantage points. Stake (2006) opined that multiple case studies add robustness, particularly in studies in the areas of the social sciences (education and public policy) which have many facets. This case study explored multiple facets related to factors that stakeholders, speech therapy personnel, deemed necessary in an interactive website dedicated to providing information and support to parents of children with SI. The intent of this case study was to gain an in-depth and first-hand understanding of the phenomenon: what do speech therapy personnel deem necessary inclusions of an interactive OSG for parents of SI children. This understanding was accomplished by gathering data from authentic, credible research participants. The participants were those directly involved with providing support and treatment for children with SI, speech therapy personnel. Utilizing survey methodology, an online questionnaire, was chosen as a vehicle in data collection for this case study.

A questionnaire is a research tool that provides qualitative data via asking questions of respondents (Fowler, 2014). Successful surveying requires the apposition of the correct choice of sampling, designing questions, and method of collecting data. Holbrook (2017) states that survey research in the form of questionnaire usage is widely employed in studies in the areas of the social sciences (education and public policy). Holbrook (2017) further explains that questionnaires can gather data about anything that can be evaluated by asking people about such as behaviors, events, knowledge, and attitudes.

Population and Sample

The population in this case study were speech-language pathology professionals and students involved with the support and treatment of children with diagnosed speech impairments or suspected speech impairments. The researcher turned to the American Speech-Language-Hearing Association (ASHA) to locate subjects.

Sample

Whereas a census entails the collection of data from every member of a population, such as the United States decennial survey, a sampling is the accumulation of information from a representative portion of a population. For this study a sample of speech therapy personnel was located with the assistance of ASHA, the national governing body of speech-language pathology. ASHA offers a mailing list rental service.

The mailing list consumer, for example a researcher or vender, advises ASHA as to the attributes of their membership (e. g., area of expertise, work setting) which they are seeking. The researcher rented 1000 names and addresses of members of ASHA in order to send them an invitation to participate in the present research. The researcher did not contact the national governing body of speech pathology students, the National Student Speech Language Hearing Association (NSSLHA), to extend a similar invitation. However, the researcher did plan to welcome students into the study and made provisions for them (see question 1 in Questionnaire, Appendix B) if they found out about the study from an ASHA member, such as a professor or clinical supervisor, and chose to participate. The manager of ASHA mailing list rentals randomly chose 1000 names that roughly geographically represented their membership per state. For example, a state with a sparse population such as Montana had two names but a heavily populated state like California had 105 names. Every state was represented. The researcher gave the mailing list manager the perimeters that the chosen SLPs should work in education facilities with clients whose ages range from birth to 17 years. The content of the invitation for prospective study subjects was submitted to the mailing list manager for approval before the names and addresses were sold to the researcher. The names and addresses were mailed to the researcher printed on individual mailing labels.

A computer assisted self-administered interview (CASI) in the form of a questionnaire was chosen as the data gathering instrument for this case study. SurveyMonkey, an online survey development cloud-based software company, provided the venue for the questionnaire.

For the present study, the subjects accessed a questionnaire on Survey Monkey. Potential participants were sent a postcard that contained a Uniform Resource Locator (URL), or an address of a World Wide Web page. The researcher used the website Bitly, a URL shortening service, and linked the long URL that was attached to the questionnaire website to the easily accessed URL of *bit.ly/survey4SLP*. The postcard also contained a Quick Response (QR) code provided by SurveyMonkey that was linked to the study site. A QR code is a two-dimensional barcode. A QR code can connect to a specific website, in this case the questionnaire's website, when scanned with a special reader on a camera phone.

The questionnaire underwent an expert review to validate the instrument for content and construct. The expert review panel consisted of the dissertation chair and one speech-language pathologist who has had over 30 years of experience the majority of which has been with school age children. The questions were broken down into both open-ended and closed-ended questions. Some personal information, such as experience, was also elicited.

A closed-ended question is one in which choices of answers are offered. Two types of closed-ended questions were used: Likert and ranking scales. The Likert scales used in this study were ordinal five-point scales. A Likert scale is frequently represented by a vertical array of choices (Horst & Pyburn, 2018). The range of choices are at times symmetrical with the center being neutral. Usually varying degrees of negativity span to the left with the most negative choice being on the far-left end. Similarly, varying degrees of positivity span to the right with the most positive choice being on the far-right end. The Likert Scale is named after Rensis Likert who introduced it in 1932. It is like a binary 'Yes'/'No' scale but adds nuance to the respondents' answer by being able to indicate their level of agreement or of non-agreement. The six questions eliciting degree of agreement/disagreement with a statement were positively written (e.g. "An interactive website devoted to parents of children with suspected or diagnosed speech impairments could serve as an online support group for those parents.") rather than negatively written (e.g. "An interactive website devoted to parents of children with suspected or diagnosed speech impairments could not serve as an online support group for those parents."). Asymmetrical Likert scales were also used in the study. There were five questions designed to ascertain respondents' perception of various assets' importance with the far-left choice labeled "Not important" and right-ward progressing labels indicating increased importance. Horst and Pyburn (2018) state when using Likert scaling only one variable should be measured at a time. When two variables are being measured (e. g., "Do you believe that you can get the best bargains in clothing and groceries when you shop online?"), which is called 'double barreling', the respondent is unable to answer. A respondent to the example question would not know if they should make a judgement about clothing being purchased online or groceries being purchased online. Likert scaled questions should ascertain attitudes by concisely eliciting only one opinion at a time.

The other type of closed-ended question was one in which the respondent was given five possible needs of parents of SI children and ask to rank them from greatest to least. This type of question is called a simple-ordered ranking (Peterson, 2013) or a Coombs unfolding model (McIver & Carmines, 2011). When referring to it as a Coombs unfolding model, the completed preferred ordered rank is called an *I scale.*

Ballou (2017) states that there are several reasons for using open-ended questions even though they are more difficult for the respondent to answer. One reason to use this type of question is when the researcher is looking for information that cannot be provided with a 'Yes'/'No' answer. Another indicator to use an open-ended question is when the researcher is seeking information beyond their own scope of knowledge. The latter was the reason the open-ended question was used in the present study. The researcher was in quest of novel suggestions as to what should be included in an interactive OSG beyond what she had uncovered in her review of the literature.

The last type of question was a hybrid between an open-ended and closed-ended question. The researcher sought to gauge the respondents' use of the Internet in their practice. In the closed-ended portion of the question they were asked, "How do you use the Internet in your practice?", given ten choices, and asked to check all that apply. In the open-ended portion of the question they were asked to write other ways, if any, they used the Internet.

Data Collection, Processing, and Analysis

The researcher made application for approval of the case study to the Northcentral University Internal Review Board (IRB). Upon obtaining IRB approval, the case study commenced, with participant recruitment and selection. The researcher purchased 1000 5.5 x 8.5-inch postcards from Vista Print. The postcards were oversized to accommodate the IRB and ASHA approved invitation (see Appendix A) on the left of the back of the card and postage and an address label on the right side of the back of the card. The front of the card had the words “An invitation to participate in a speech-language pathology study” overlaid over a photo of a man and woman looking at a computer. The researcher found the uncopyrighted photo on the Bing Images website. The 1000 name/address labels purchased from ASHA as well as postage were affixed to the right side of the backs of the postcards and mailed.

Using the Bitly URL or QR code the participants accessed the questionnaire hosted by SurveyMonkey. First, they were given an informed consent written according to NCU guidelines (see Appendix B). They were asked to check a box labeled “I agree” if they understood the contents of the informed consent. There also was a spot, again according to NCU policy, where they could enter their name, even though this was an anonymous study.

The steps used for data collection were as follows:

1. Personal information was elicited
   a. Was the respondent a student or a professional? If they were a professional, were they currently working, on a hiatus, or retired?
   b. How many years had they been working?
   c. In what types of settings had they been working?
2. Questions based on the four research questions were asked of the respondents.
3. Respondents were asked to give their name and email address if they wished to be entered in a drawing for one of four gift cards offered by the researcher as a thank you for participating in the study.

There were three types of data collection processing for this case study. The first method of data processing was graphing or charting. Simple bar charts, a way to visualize data, were used to analyze the answers to the close-ended questions (Michal & Shah, 2018). The use of bar charts is a way of representing frequency distributions for categorical variables. The second method of data processing was percentage frequency distribution. Percentage frequency distribution is a representation of data that tallies the percentage of agreements that exist for each data point. Shapiro (2011) states that percentage frequency distribution is particularly useful in surveys. The third method of data processing was coding. Coding was used to analyze the answers to the open-ended question. The researcher planned to base coding on the model used in the Oprescu et al. (2013) study. Oprescu et al. (2013) conducted a study involving parents of children with club foot who participated in an interactive website. The parents who went to the website were able to interact with other parents of children with this rare anomaly through this venue. Oprescu et al. (2013) used content analysis to explore and categorize the content of 775 messages. Messages were broken down into such categories as: information seeking; offering a fellow participant an answer; passive information seeking; self-disclosure; and, second guessing. Oprescu's et al. (2013) categories were the basis to their coding of the 775 messages. Those in the Social Support Behavior Code (SSBC) categories (Cutrona & Suhr, 1992) were also considered for the present study. Those categories are: emotional, informational, network, esteem, and tangible assistance.

Frequency of a variable is measured often in the social sciences (Fielding & Gilbert, 2012). Bar graphs and percentage frequency distributions are a very visible way to report data so that it is easily understood. The first four questions, which were closed-ended, elicited personal data from the respondents. Bar graphs were used to report respondents' answers. Each questions' variable (level of involvement in speech pathology, years active, settings, and Internet usage) was represented on the *x* axis and percentage was represented on the *y* axis. Answers to all of the other closed-ended questions were represented on Likert scales. These questions elicited an opinion. Results were also reported on bar graphs. The height of the bar originating on the *x* axis was determined by the average rating of respondents on the five-point Likert scale represented on this *y* axis. Each bar graph was also accompanied by a table enumerating the percentage frequency distribution of choice for each point on the Likert scale.

The researcher compiled the answers to the study's open-ended question: What do you feel should be included in an interactive website devoted to parents of children with a suspected or diagnosed speech impairment? The researcher then looked for themes to arise from these comments. Each of the participants' comments were assigned a word/phrase to sum up its intent. For example, the following is a fictional SLP comment with a summation word/phrase:

"I had a parent crying in my office when I told her the results of her child's evaluation.[1] I gave her the Sander's (1972) development chart, though, to show her he wasn't severely delayed like she believed[2]."

The first part (1) of this utterance could be classified as *emotional.* The second part (2) could be classified as *informational.* These two classifications come from the Social Support Behavior Code (SSBC) (Cutrona & Suhr, 1992). Besides emotional and informational the SSBC also includes: network, esteem, and tangible assistance. This is not to say that all responses in this case study fell into this code but that the researcher anticipated these types of responses from speech therapy personnel. Coding is not a rigid exercise. In fact, Creswell (2009) urges researchers to read their notes, code, and then examine their efforts again to determine if the code used is adequate.

Trends and themes emerge from cross case analysis. After the resulting questionnaire responses of the current case study were sorted according to type of answer (open-ended questions, Likert scale, ranking) by the researcher, data was analyzed. The researcher manually used content (textual) analysis to explore and categorize the data from the open-ended questions answers. During the analysis process, data was broken into categories. After data had been coded as to the category in which it fell, it was anticipated that some of the categories emerging from the current case study would have been similar to that of the Oprescu's et al. (2013) study (information seeking; offering a fellow participant an answer; passive information seeking; self-disclosure; and, second guessing) and that of the SSBC (Cutrona & Suhr, 1992) (informational, emotional, network, esteem, and tangible assistance). However, the researcher remained flexible because as Creswell (2009) posited categories are not always obvious on the first analysis of data. The researcher was cognizant that while she may had predicted at the beginning of the qualitative research what the outcome might likely have been, she realized she might have had to readjust her expectations as the data unfolded (Yin, 2004). Therefore, although the researcher anticipated the content of the open-ended questions portion of the questionnaire would cluster around anticipated categories adjustments to these categories were made if necessary. For example, if one of the open-ended questions comments did not fall under categories from previous studies (Cutrona & Suhr's, 1992; Oprescu et al.,2013) the researcher would establish a novel category that summed up the comment.

Assumptions

Qualitative research methodology had been selected for this case study. This choice was made because of the intent of the case study as stated in the title: *Exploring an online support group devoted to parents of children with speech impairments.* To understand the perspectives of the stakeholders, in this case speech therapy personnel, one must have ascertained the subjects' opinions. Yin (2004) stated that a case study is warranted if the following two conditions are met: (1) a *what* question is asked; and, (2) the researcher is looking for an understanding of the topic that is both intimate and comprehensive in order to answer the question he has posed. To meet the first condition, the research questions in this case study were interrogative (e.g., What should be included on an interactive website for parents of speech impaired children?).

Limitations

There are challenges when descriptive validity, such as used in this case study, is employed (Johnson, 1997). This particular type of validity is labeled as descriptive because the researcher is organizing subjects' spontaneous answers in the form of an open-ended question into categories that she feels describes the subject's intent. A validity challenge was the fidelity of the researcher's interpretation of the subjects' intent when they answered the open-ended question. This was reflected in the researcher's choice of categorization of the participants' statements. Beck (2009) opined that the triangulation of the value of the theory expounded by the researcher lies partially in the careful case study of the themes that emerge from the data and the researcher's understanding of the themes. The researcher's literature review can also serve to triangulate the final theory.

Delimitations

Delimitations are boundaries set by the researcher in order to control the range of a study. Delimitations were set by defining the following areas: purpose of the case study including case study subjects; research questions; research methodology and protocol; and, data analysis. The purpose of the case study was determined to have been an exploration of stakeholders' perspectives on an online support group devoted to parents of children with SI. The stakeholders in question consist of speech therapy personnel chosen because of their intimate knowledge of and dedication to these children. A qualitive method of inquiry was chosen because it met the criteria set by Yin (2004) who stated a case study, a type of qualitative method, is warranted if the following two conditions are met: (1) a *what* question is asked; and, (2) the researcher is looking for an understanding of the topic that is both intimate and comprehensive in order to answer the question he has posed. To meet the first condition, the research questions in this case study were interrogative (e.g., What should be included on an interactive website for parents of speech impaired children?). Yin (2004) suggested choosing a multiple case study if the phenomenon being studied is not "unique and idiosyncratic" (p. 10). The research questions were formulated with the goal of defining specifically what each stakeholder felt was needed on such a site devoted to parents of SI children and the questions in the questionnaire were based on those foundational research questions.

There are other groups who have interests in seeing SI parents' needs met. Some of these groups are physicians, school administrators, insurance providers, and classroom teachers. However, while these groups are interested in parents of SI children, they do not have the intimate knowledge of the parents and SI children as those subjects chosen for the case study. Another facet that was rejected for the case study was quantitative methodology. It was not felt to offer the sensitivity needed to analyze the opinions that were the final goal of the case study. One of the delimitations was the review by the expert review panel of the questions.

Ethical Assurances

Northcentral University’s (NCU) Institutional Review Board (IRB) approval was obtained prior to any data collection. Using NCU’s template an informed consent form was created (see Appendix B). Participants were asked to check a box labeled “I agree” if they understood the contents of the informed consent. Through the informed consent information, the researcher insured the participants that the information they provided would had been kept confidential by storing it on a dedicated flash drive for seven years. The researcher further stated that those having access to the information would had been limited to the researcher, the dissertation chair, and the Institutional Review Board. She assured the flash drive would had been stored in a locked, fireproof strongbox for seven years and then, the electronic data would had been deleted.

The Belmont Report was authored by the US federal government in 1979 as a deterrent to unethical medical research. The document sets a standard for ethical research practices involving human subjects based on the following principles: respect for persons, beneficence, and justice. Respect for persons means that subjects should be completely informed about a study and be given the option to decline participation. Beneficence is the guarantee that there will be no or minimal negative consequences to the subjects secondary to participating in the research. Justice is the assurance that that the benefits of the research will be distributed fairly (Salganik, 2014).

This present research adhered to all three of these ethical principles. The detailed informed consent that was given to each participant addressed respect for person. The minimal negative consequences identified by the researcher, perhaps a possible discomfort for a participant who has never completed an online questionnaire might feel anxious doing so, satisfied beneficence. Justice was fulfilled by the researcher's attempts to make this case study known to those in the speech-language pathology field. The proposal for this case study was presented at Texas Speech-Language-Hearing Association (TSHA) annual convention in 2017 and the researcher is currently writing a proposal for the 2019 TSHA annual convention with follow-up information.

Summary

This qualitative multiple case study sought to determine SLPs' and SLP students' perceptions of tools needed by parents to support their SI child which might be included in the development of an interactive OSG dedicated to speech therapy treatment and information sharing. As a result of this case study an interested party, such as a parent or a SLP, may be able develop an OSG as a vehicle by which to form a partnership between SLPs and parents of communicatively impaired children, after learning what the case study's stakeholders deemed as necessary for such an endeavor.

Chapter 4: Findings

The purpose of this qualitative multiple case study was to determine what speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceived as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI (i.e., regarding components of service, coordinated service, support from other parents, and components of information). The chapter begins with an explanation of the trustworthiness of the data including credibility, transferability, dependability, and confirmability. Next is a presentation of the results organized around the study research questions. The chapter concludes with an evaluation of the findings and summary of the chapter.

Trustworthiness of the Data

Qualitative researchers utilize trustworthiness as the benchmark for the fidelity of their results. Lincoln and Guba (1985) opined that the trustworthiness of data was reliant on its credibility, transferability, confirmability, and dependability. This section will explore the steps taken to ensure trustworthiness of data in the study.

Credibility. Lincoln and Guba (1985) stated in order to prove credibility, the researcher can use prolonged engagement, persistent observation, or triangulation. Triangulation was used in this study. The credibility of data is supported when it can be triangulated by multiple sources. Beck (2009) opined one form of support of the value of a theory expounded by the researcher lies partially in the careful case study of the themes that emerge from the data and the researcher's understanding of the themes. Glaser and Strauss (1967) explained this inductive process as discovering a theory from the data. This process was used by the current researcher to analyze and code the data elicited by the questionnaire (see Appendix B). The researcher's literature review can also serve to triangulate theory since it provides a basis for the researcher to understand her data. To satisfy both Beck's (2009) dictum and triangulation via literature review the researcher in the present study looked to two previous studies of the analysis of parents' needs (Mohd Roffeei, Abdullah, & Basar, 2015; Oprescu, Campo, Lowe, Andsager, & Morcuende, 2013). Perceptions of similar parental needs revealed in those two studies was also supported in this study.

Transferability. Lincoln and Guba (1985) state that it is almost impossible to prove transferability as one would need to be able to predict the future to do so. However, Lincoln and Guba (1985) do allow that one might be able to assist in insuring transferability by providing a detailed description of their research if another researcher attempts to replicate the original study. The facility to generalize data to other circumstances is known as transferability. With the information gathered from this study an interested stakeholder such as a speech-language pathologist (SLP) or a parent might create such a website which has been envisioned here for parents of children with diagnosed speech impairments or suspected speech impairments which could supplement and enhance the SLP-parent relationship or serve as an online support group (OSG).

Confirmability. Confirmability is assured when data is not influenced by researcher bias (Jensen, 2008). Most data in the current study was reported in percentage frequency distribution. Interpretation of frequency distribution is typically transparent and not subject to bias. The interpretation of data which was not reported in frequency distribution or ranking order necessitated that it be coded into categories. Assigning data into specific categories can be subject to researcher bias based on interpretation of the data. However, to avoid researcher bias the author of the present study heeded qualitative experts' advice. As Creswell (2009) posited, categories are not always obvious on the first analysis of data. Although a qualitative researcher may have predictions as to outcomes at the commencement of a study, they must realize adjustments might be necessary as the data unfolds (Yin, 2004). Lincoln and Guba (1985) opine there can be no confirmability without reliability. This study was based on responses from a reliable source, SLPs, who are involved with the diagnosis, management, and treatment of SI children.

Dependability. Jenson (2008) stresses the dependability of a study rests upon the correct choice of subjects- SLPs in this study. The following detailed account of the methodology and design was offered in the interest of dependability if others would be interested in repeating the present study. Purposefully selected research participants, SLPs who are involved with the management and treatment of children with diagnosed speech impairments or suspected speech impairments, were units of analysis for this case study. SLP students were welcomed to participate in the study, but they were not specifically sought. The researcher purchased 1000 SLPs' names and addresses from the Association (ASHA). ASHA is the best source to find SLPs in the United States. One thousand names which were an approximate geographical representation of ASHA membership per state were randomly chosen by its mailing list rental manager. One thousand postcards entitled "An invitation to participate in a speech-language pathology study" were sent to these SLPs. This postcard had a description of the study (see Appendix A) and both a web address and a Quick Response (QR) code to link to the online questionnaire (see Appendix B), which was the data gathering vehicle for the study. The intent was to capture their perceptions of essential data based on their shared experiences to be included on a dedicated website devoted to speech therapy diagnoses and prognoses, general information, and reinforcement techniques of skills garnered through speech therapy.

Personal questions were designed not only to elicit information about the participants but also to ascertain if they have remained current in the practice of the field of speech-language pathology. Except for one respondent who was presently taking time off, all were working. No respondent had less than five years of experience. The majority, 47.62 %, had 10-19 years. The second highest group had 30+ years at 28.57 %. All the respondents had experience with early childhood intervention. The second largest group were those who had worked in elementary school with 90.48%. The remaining therapy settings in order of frequency were as follows: tied at 57.14% were middle school, high school. and adult care; geriatric care; and, settings serving a variety of ages. Only one person added an additional setting and that was behavioral health. The reader will note that when the above percentages are added the sum greatly exceeds 100%. It is not uncommon for individual SLPs to work in a variety of settings at one time or throughout the life of their career (ASHA, 2016a). All respondents used the Internet in their practice to update their professional knowledge. The next highest category of use with 95.24% was locating therapy activities. Tied for third place at 90.48% were: locating therapy materials, purchasing therapy materials, and finding information for clients and their significant others. The least used reason at 28.57% was interacting with clients' significant others (e.g., caregivers other than parents, partners, siblings, spouses). The researcher ensured no potentially identifying information was reported.

Results

The purpose of this qualitative case study was to determine what speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceived as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding: components of service, coordinated service, support from other parents, and components of information. Such a website might serve as an interactive OSG dedicated to speech therapy treatment and information sharing. The goal of this case study was to provide information needed to develop an OSG as a vehicle by which to form a partnership between SLPs and parents of SI children.

SLPs served as participants and were located through the American Speech-Language-Hearing Association (ASHA). Table 1 shows respondents' work status. Table 2 shows respondents' years of work experience.

Table 1

Respondents' Work Status

Status	Taking time off	Working
Percentage	4.35%	95.65%

Table 2

Respondents' Years of Work Experience

Years of experience	Less than one year	1-4 years	5-9 years	10- 19 years	20-29 years	30+ years
Percentage	0.00%	0.00%	4.76%	47.62%	19.05%	28.57%

Using an online questionnaire (see Appendix B), participants provided opinions and perceptions related to essential content when creating an OSG specifically designed to meet the needs of parents and their SI children. Three types of questions were used to elicit the opinions and perceptions of the participants: (a) rank-order; (b) 5-point Likert scale; and (c) open-ended. Results are organized and presented by research question.

Rank-order question. Respondents were offered the following list of possible needs parents of SI children might experience and asked to rank them in order of greatest to least need:

A. Information about how to find out if their child is speech impaired
B. Locating financial help to pay for therapy services
C. Locating local therapy providers
D. Information about activities to reinforce therapy at home
E. A venue to interact with other parents of children with speech impairments

The ranking questions are cross referenced with all but Research Question 2 (What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding coordinated service?). The ranking is reported via a bar chart (see Figure 1) with the height originating on the *x* axis representing the average rating of respondents on the five above choices given them represented on the *y* axis: one (1) as the least need of parents of children with SI and five (5) as the greatest need of parents of children with SI. Results indicate the highest ranked choice was "Information about how to find if their child was speech impaired" and the lowest ranks choice was "A venue to interact with other parents of children with speech impairments."

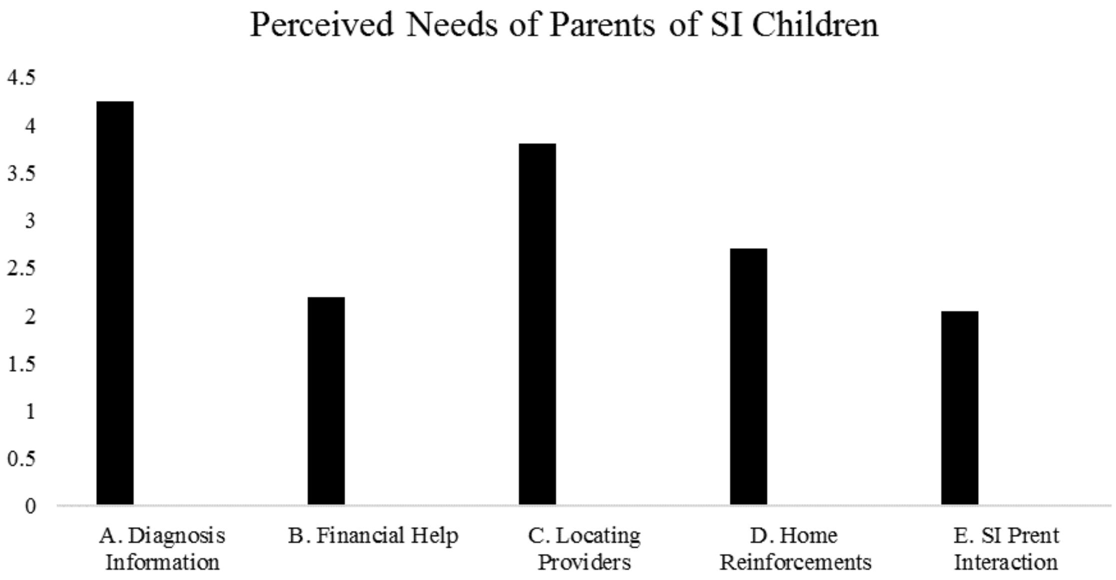

Figure 1. Bar chart representing ranked order of perceived parental needs

Research Question 1

What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of service (e. g., screening, therapy, audiology, social support, and funding support)? Research question 1 was answered by examining the findings from questions 9 and 15 of the questionnaire (see Appendix B).

Questionnaire question 9. How important is it for a parent of a child with a suspected or diagnosed speech impairment to have access to information in regard to finding financial help to pay for therapy services? This question aligns with Cutrona and Suhr's (1992) category of seeking tangible assistance. The answers to each of the questions dealing with a Likert scale were reported in a table enumerating the percentage frequency distribution of choice for each point on the Likert scale with an accompanying weighted average. As shown in Table 1 the majority of respondents felt that having access to information in regard to finding financial help to pay for therapy services was ‘extremely important’ at 42.86%.

Table 3

Frequency Distribution of Likert Scale Choices for Questionnaire Question 9

Rating	Not Important	Mildly Important	Moderately Important	Very Important	Extremely Important	
Percentage	0.00%	19.05%	9.52%	28.57%	42.86%	
Weighted Average						3.95

Questionnaire question 15. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairment provide information regarding components of service (e. g., screening, therapy, audiology, social support, and funding support)? This question aligns with Oprescu’s et al. (2013) information seeking and Cutrona and Suhr’s (1992) informational categories. As shown in Table 2 the majority of respondents ‘strongly agreed’ at 66.67% a website could provide information in regard to components of service.

Table 4

Frequency Distribution of Likert Scale Choices for Questionnaire Question 15

Rating	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	
Percentage	0.00%	0.00%	4.76%	28.57%	66.67%	
Weighted Average						4.62

Research Question 2

What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding coordinated service (e. g., co-located services and team coordination)? Research question 2 was answered by examining the response to question 16 of the questionnaire (see Appendix B). The research questions for the current study were largely based on Fitzpatrick, Angus, Durieux-Smith, Graham, and Coyle's (2008) study of the needs of parents of children with hearing impairments or auditory impairment (AI). This group of parents is similar to parents of children with SI. Each group is made up of parents of children with communication disorders. However, there is an area of need for parents of AI children that does not largely transfer to the parents of SI children. That is colocation of services. AI children need the services of multiple professionals for their treatment- otolaryngologists (ear, nose, and throat doctors), audiologists, and SLPs. It is a great convenience for parents of AI children if all these providers are located in one place. However, SI children generally only need an SLP and so colocation of services is not a pressing issue for their parents. There is one exception to this. A child may be SI because of a cleft lip or palate. In that case parents may desire the colocation of a plastic surgeon, an orthodontist, and an SLP. However, the Center for Disease Control (CDC) reports the incidence of cleft palate is much smaller that of AI, 0.11 births (CDC, 2017b) as opposed to 14.9% of children ages 6-19 (CDC, 2017a). Because of this difference in populations only one question about the importance of colocation was asked in the questionnaire.

Questionnaire question 16. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairment (SI) provide information regarding coordinated service (e. g., co-located services and team coordination)? This question aligns with Cutrona and Suhr's (1992) category of seeking tangible assistance. As shown in Table 3 the majority of respondents 'strongly agreed' at 47.62% a website could provide information in regard to coordinated service.

Table 5

Frequency Distribution of Likert Scale Choices for Questionnaire Question 16

Rating	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	
Percentage	0.00%	0.00%	14.29%	38.10%	47.62%	
Weighted Average						4.33

Research Question 3

What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding support from parents (e. g., organized through health services and through parents' groups)? Research question 3 was answered by examining the responses provided to questions 12, 14, 17, and 19 of the questionnaire (see Appendix B).

Questionnaire question 12. How important is it for a parent of a child with a suspected or diagnosed speech impairment (SI) to have the ability to interact with other parents of children with speech impairments? This question aligns with Cutrona and Suhr's (1992) network category. As shown in Table 4 the majority of respondents felt that having the ability to interact with other parents of children with speech impairments was 'very important' at 38.10%.

Table 6

Frequency Distribution of Likert Scale Choices for Questionnaire Question 12

Rating	Not Important	Mildly Important	Moderately Important	Very Important	Extremely Important	
Percentage	0.00%	9.52%	33.33%	38.10%	19.05%	
Weighted Average						4.33

Questionnaire question 14. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairment (SI) serve as an online support group for those parents? This question aligns with Cutrona and Suhr's (1992) network category. As shown in Table 5 the majority of respondents 'somewhat agreed' at 50.00% a website could serve as an online support group for parents of SI children.

Table 7

Frequency Distribution of Likert Scale Choices for Questionnaire Question 14

Rating	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	
Percentage	0.00%	0.00%	15.00%	50.00%	35.00%	
Weighted Average						4.20

Questionnaire question 17. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairment provide information regarding support from other parents (e. g., organized through health services and through parents' groups)? This question aligns with Oprescu's et al. (2013) information seeking and Cutrona & Suhr's (1992) informational categories and with Cutrona and Suhr's (1992) network category. As shown in Table 6 the majority of respondents 'strongly agreed' at 50.00% a website could provide information in regard to support from other parents.

Table 8

Frequency Distribution of Likert Scale Choices for Questionnaire Question 17

Rating	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	
Percentage	0.00%	10.0%	5.00%	35.00%	50.00%	
Weighted Average						4.25

Questionnaire question 19. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairment become a venue for peer (parent-to-parent) counseling? This question aligns with Cutrona and Suhr's (1992) network category. As shown in Table 7 the majority opinions of respondents were split between 'somewhat agreed' and 'strongly agreed' each at 45.00% a website could become a venue for peer (parent-to-parent) counseling.

Table 9

Frequency Distribution of Likert Scale Choices for Questionnaire Question 19

Rating	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	
Percentage	5.00%	0.00%	5.00%	45.00%	45.00%	
Weighted Average						4.25

Research Question 4

What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of information (e. g., therapy/resource options, prognostic guidance, and access to information)? Research question 4 was answered by examining the responses to questions 8, 10, 11, and 18 of the questionnaire (Appendix B).

Questionnaire question 8. How important is it for a parent who suspects that their child has a speech impairment have access to speech/language developmental milestones explanations such as ASHA's *How Does Your Child Hear and Talk?* This question aligns with Oprescu's et al. (2013) information seeking and Cutrona & Suhr's (1992) informational categories. As shown in Table 8 the majority of respondents felt that having access to speech/language developmental milestones explanations was 'extremely important' at 42.86%.

Table 10

Frequency Distribution of Likert Scale Choices for Questionnaire Question 8

Rating	Not Important	Mildly Important	Moderately Important	Very Important	Extremely Important	
Percentage	0.00%	0.00%	19.05%	38.10%	42.86%	
Weighted Average						4.24

Questionnaire question 10. How important is it for a parent of a child with a suspected or diagnosed speech impairment to have access to information in regard to finding local therapy providers? This question aligns with Cutrona and Suhr's (1992) category of seeking tangible assistance. As shown in Table 9 the majority of respondents felt that having access to information in regard to finding local therapy providers was 'extremely important' at 47.62%.

Table 11

Frequency Distribution of Likert Scale Choices for Questionnaire Question 10

Rating	Not Important	Mildly Important	Moderately Important	Very Important	Extremely Important	
Percentage	0.00%	9.52%	4.76%	38.10%	47.62%	
Weighted Average						4.24

Questionnaire question 11. How important is it for a parent of a child with a suspected or diagnosed speech impairment to have access to information about activities to reinforce therapy at home? This question aligns with Oprescu's et al. (2013) information seeking and Cutrona and Suhr's (1992) informational categories. As shown in Table 10 the majority of respondents felt that having access to information about activities to reinforce therapy at home was 'very important' at 47.62%.

Table 12

Frequency Distribution of Likert Scale Choices for Questionnaire Question 11

Rating	Not Important	Mildly Important	Moderately Important	Very Important	Extremely Important	
Percentage	0.00%	14.29%	14.29%	47.62%	23.81%	
Weighted Average						3.81

Questionnaire question 18. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairment provide information regarding support from components of information (e. g., therapy/resource options, prognostic guidance, and access to information)? This question aligns with Oprescu's et al. (2013) information seeking and Cutrona & Suhr's (1992) informational categories. As shown in Table 11 the majority of respondents ‘strongly agreed’ at 65.00% a website could provide information in regard to support from components of information.

Table 13

Frequency Distribution of Likert Scale Choices for Questionnaire Question 18

Rating	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	
Percentage	0.0%	0.00%	0.00%	35.00%	65.00%	
Weighted Average						4.65

Questionnaire question #13. The respondents were asked the following open-ended question: “What do you feel should be included in an interactive website devoted to parents of children with a suspected or diagnosed speech impairment?” In some cases, the respondent provided multiple suggestions. The total number of suggestions was 35. Open coding in qualitative research is a method of examining and analyzing the data. Through the process of induction categories develop from the data. Emergent themes serve as summarizations of how categories rank in frequency and importance.

The answers to the opened-ended question (“What do you feel should be included in an interactive website devoted to parents of children with a suspected or diagnosed speech impairment?”) are presented by emergent theme (see Appendix C). For the current study, the codes were the labels that the researcher assigned to the participant’s answers. For example, to the open-ended question “What do you feel should be included in an interactive website devoted to parents of children with a suspected or diagnosed speech impairment?” one respondent suggested “faq (frequently asked questions)." The label affixed by the researcher to this comment was 'information'. Codes were organized into categories. Since there were several comments labeled as 'information' then 'searching for information' became a category to encompass some of the data. When all of the answers from all types of questions were analyzed it became apparent that respondents felt that 'searching for information' was a priority. A theme, which was locating information by parents of SI children, most frequently emerged. Therefore, the strongest theme which emerged was that respondents felt the area of greatest parental need was locating information.

Consumer alert. A novel category which was not based on the literature also emerged from the following two comments which could not be aligned with either Oprescu's et al. (2013) or Cutrona and Suhr (1992):

1. The material should be presented from accredited sources. My concern with other families providing information is that it is not always accurate.
2. Ensure the community is monitored by licensed SLPs.

This novel category was entitled "consumer alert" to reflect the respondents' concerns that the information on the website be accurate and credibly sourced. For a full list of comments and the categories in which they fall from greatest to least (see Appendix C).

Evaluation of the Findings

Based on the findings from this study, parents of SI children have many concerns. Among these concerns are locating components of service, coordinated services, support from other parents of SI children, and information. The Internet has become an ever-increasing place to seek information. An online support group (OSG) can provide the information that parents of SI children may want and the caring reassurance they may need. OSGs are available for parents of children with such impairments as autism and Down syndrome. However, there is a dearth of such resources for parents of SI children. The purpose of this qualitative multiple case study was to determine tools needed by parents to support their SI child which might be included in the development of an interactive OSG dedicated to speech therapy treatment and information sharing. The goal of this case study was to provide information needed to develop an OSG as a vehicle by which to form a partnership between speech language pathologists (SLPs) and parents of SI children. In a quest for trustworthiness and truth in research the present multiple case study accessed authentic, credible research participants, speech therapy personnel, to gain in-depth and first hand understanding of the phenomenon at hand.

RQ 1. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of service (e. g., screening, therapy, audiology, social support, and funding support)? Parents facing the possibility that their child's communication skills may be delayed need tangible assistance. For example, of considerable anxiety provocation for parents of children with a SI is the difficulty they may have getting financial coverage for their child's speech therapy services if they have private health insurance. The literature reports an insurance policy may cover therapy for one kind of condition but not therapy for a SI of a different etiology (ASHA, n. d. a). The speech therapy for children who qualify for Medicaid is more frequently covered that the therapy for children with private insurance. Study participants indicated locating components of service particularly therapy, social support, and funding support were important as evidenced by their responses to all three forms of questions (open-ended, ranking, and Likert).

RQ 2. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding coordinated service (e. g., co-located services and team coordination)? Parents looking for treatment for their SI child may seek the convenience of co-located services which affords the opportunity to benefit from the care of multiple providers in one location. For example, a child may be SI because of a cleft lip or palate. In that case parents may desire the co-location of a plastic surgeon, an orthodontist, and an SLP. Also, the literature reports universities which train multiple allied health professions' students, allows the offering of co-located or integrated patient services that Glennen (2017) report are beneficial for both children and their parents. Current study participants did acknowledge that co-location of services could be valuable but did not view it as a priority.

RQ 3. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding support from parents (e. g., organized through health services and through parents' groups)? Parents of children with SI face unique challenges in seeking means to facilitate the improved communication skills of their offspring. Glogowska (2002) reported on the isolation and fear parents of young children with SI experience. Research shows some anxiety and stress can be dispelled when parents are surrounded by the companionship of others who are experiencing similar difficulties with their own children (Connolly & Gersch, 2013;

Leung, Leung, & Fong, 2013). However, participants in the current study were leery about this type of support. This trepidation was evident in responses across all three types of questions.

RQ 4. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of information (e. g., therapy/resource options, prognostic guidance, and access to information)? An area of need for parents suspecting their child has a speech impairment is the securing of information. Research shows when parents are confronted by unfamiliar forces which effect their children, they may experience anxiety. According to the Uncertainty Management Theory (UMT) this anxiety or uncertainty can be assuaged or managed by information seeking (Brashers, 2001). A qualitative study by Bingham et al. (2012) chronicled six mother's reactions to their child's diagnosis of a developmental delay (DD), which can include language delays. As coping mechanisms, every one of the mothers utilized seeking information. Present study participants felt this was the greatest area of need for parents as indicated by their responses to all three types of questions: open-ended, ranking, and Likert.

Summary

The purpose of this qualitative multiple case study was to determine tools needed by parents to support their SI child which might be included in the development of an interactive OSG dedicated to speech therapy treatment and information sharing. The results of the study revealed a thematic hierarchy of responding SLPs' opinions as to what should be included in such a site: information, tangible support, and networking support. There was one unanticipated area of concern. This was a warning that the information being provided to parents should be accurate. This study was organized around three research studies (Cutrona and Suhr, 1992; Fitzpatrick, Angus, Durieux-Smith, Graham, and Coyle, 2008; Oprescu et al., 2013). The questions for the present study were based on the work of Fitzpatrick, Angus, Durieux-Smith, Graham, and Coyle's (2008) work, which was a study of the needs of parents of children with hearing impairments. Oprescu et al. (2013) and Cutrona and Suhr (1992) created the themes or categories which were used in the present study. The responding SLPs' strongest opinions clustered around four of Oprescu's et al. (2013) and Cutrona and Suhr's (1992) themes or categories. Of Oprescu's et al. (2013) themes or categories- information seeking was emphasized. Of Cutrona and Suhr's (1992) themes or categories- informational, tangible assistance, and network were also highlighted in the current study. Across the span of answers to questions posed by the online questionnaire a hierarchy emerged. Parents' ability to locate information was deemed paramount by respondents. This need was followed by a quest for tangible assistance. The third area of need was the opportunity to network with other parents of SI children. These themes were universal in the respondents' opinions regardless of type of question (open-ended, ranking, or Likert) posed by the researcher. An unanticipated theme did emerge. The author of the present study coined that theme as 'Consumer Alert'. It focused around a concern by the respondents that parents of SI children were given accurate information.

Chapter 5: Implications, Recommendations, and Conclusions

The problem examined in this qualitative multiple case study was a lack of social media in the form of online support groups (OSGs) offering opportunities of support services available for parents of speech impaired children. The purpose of this qualitative case study was to determine what speech therapy personnel perceived as essential to be included in a dedicated website devoted to parents of children with suspected speech impairment (SI) or diagnosed SI regarding components of service, coordinated service, support from other parents, and components of information. Utilizing survey methodology, an online questionnaire was chosen as a vehicle in data collection for this case study. For this study, a sample of speech therapy personnel was located with the assistance of the American Speech-Language-Hearing Association (ASHA), the national governing body of speech-language pathology. The potential respondents were invited to complete an online computer assisted self-administered interview (CASI) questionnaire. The questionnaire results provided the researcher with insight to respondents' opinions. A content analysis was conducted on the questionnaire responses in order to develop themes that addressed the research questions of the study. Themes emerging from the questionnaire data were compared with responses from previous social science studies (Cutrona & Suhr, 1992; Mohd Roffeei, Abdullah, & Basar, 2015). By taking part in the questionnaire respondents were given the opportunity to share their opinions as to what should be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of service, coordinated service, support from other parents, and components of information. Their responses were units of analysis for this case study. These findings are integral for an interested party, such as a parent or a SLP, who may want to develop an OSG as a vehicle by which to form a partnership between SLPs and parents of SI children, after learning what the case study's stakeholders deemed as necessary for such an endeavor. An informed consent was obtained from all participants. The limitations of the present study included the number of participating SLPs. Of 1000 invitees, 23 accepted and joined in the study. This resulted in a 2.3% rate of participation.

Implications

With all of the evidence in the literature of powerful improvements in the socio-emotional status of patients and their families; (Chung, 2013; Kozlowski, Provost, Tucker, & van der Zwan, 2014; Lemma & Fonagy, 2013; Leung, Leung, & Fong, 2013; Patterson, Brewer, & Stamler, 2013) as well as, information sharing via OSGs (Guo & Goh, 2014; Oprescu, Campo, Lowe, Andsager, & Morcuende, 2013) one would assume this would be a popular venue for many parents of children with disabilities such as autism (Banach & Course, 2012; Clifford & Minnes, 2013a, 2013b; Connolly & Gersch, 2013) and Down syndrome (Down syndrome: Parents sharing, 2016). One group that appears lacking in this type of support is parents of children with diagnosed or suspected SI. This study attempts to fill this void and answer the question- What should be included on an interactive website for parents of speech impaired children?

Using the data collection procedures outlined in chapter 4, a qualitative multiple case study was conducted. The results of the study revealed a thematic hierarchy of responding SLPs' opinions as to what should be included in such a site: information, tangible support, and networking support. There was one unanticipated area of concern. This was a warning that the information being provided to parents should be accurate.

Research question 1. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of service (e. g., screening, therapy, audiology, social support, and funding support)? Parents of children with SI encounter many challenges in searching for help for their children. These parents may need tangible assistance and support. Tangible support can be defined as the physical provision of services and goods (Ko, Wang, & Xu, 2013). The types of tangible assistance they might require could include these components of service: screening, therapy, audiology, social support, and funding support. They need to locate an SLP who will screen and/or evaluate their child to determine if SI is present. In the case of a diagnosed SI, the child will need to be seen by an SLP for remediation services. If there is a suspected hearing impairment that is contributing to the SI, an audiologist must be consulted. These parents also may benefit from the social support found by joining a group of parents of SI children. The study participants offered suggestions across all three platforms of questions (open-ended, ranking, and Likert) to assist parents in locating the tangible assistance of components of service: screening, therapy, audiology, social support, and funding support. For screening, therapy, and audiology they suggested the provision of "list of providers" and "links to specialist" as answers to the open-ended question. They ranked "locating local providers" as second only to "information about how to find out if their child is speech impaired" on the ranking question. Addressing the need for social support one respondent suggested the provision of "perhaps volunteer 'mentors' for specific disability/disorder categories" as an answer to the open-ended question. One subject offered "how to get evaluations and therapy covered by insurance" in response to the open-ended question to address funding support.

Research question 2. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding coordinated service (e. g., co-located services and team coordination)? Fitzpatrick, Angus, Durieux-Smith, Graham, and Coyle (2008) sought to discover the needs of parents of auditorily impaired (AI) children. AI children frequently require the services of multiple professionals such as audiologists, otolaryngologists (those physicians specializing in the care of the ear, nose, and throat) as well as speech-language pathologists (Fitzpatrick, Angus, Durieux-Smith, Graham, & Coyle, 2008). Fitzpatrick et al. (2008) found not only was it convenient when multiple providers were in one location but also parents felt the colocation facilitated shared information among providers and improved continuity of services. AI children share the presence of communication challenges with SI children. SI children may not require the services of multiple professionals in one location as frequently as AI children. An exception occurs when a child may be SI because of a cleft lip or palate. In that case parents may desire the co-location of a plastic surgeon, an orthodontist, and an SLP. These children often time undergo such protracted and painful treatment in the form of multiple surgeries that it is a comfort to access a familiar location with an equally familiar staff. Also, the literature reports universities which train multiple allied health professions' students, allows the offering of co-located or integrated patient services that Glennen (2017) reported are beneficial for both children and their parents because this feature saves them time and travel when a child's disability necessitates multiple visits to a variety of providers. Current study participants did acknowledge that co-location of services could be valuable but did not view it as a priority.

Research question 3. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding support from parents (e. g., organized through health services and through parents' groups)? Parents of children with SI are confronted with unique hardships in seeking means to facilitate the improved communication skills of their offspring. Aras et al. (2014) studied a group of parents of a heterogeneous group of children having either a hearing impairment or a mixed expressive/receptive language disorder. This group of parents was found to have a lower health related quality of life as measured by physical functioning, bodily pain, social functioning, and emotional well-being as well as general health, energy-vitality, and mental health than of parents of normally developing children. This impaired quality of life is important to consider as parental health is a cofactor in the overall development of children. Luterman (2017) stated some parents are so overwhelmed by their child's SI they begin to ignore their own needs. Glogowska (2002) reported on the isolation and fear parents of young children with SI experience. These parents shared their private emotions when they spoke to her and her team of researchers. The mental strain of chronic depression as well guilt caused by the diagnosis of a SI will negatively impact parents (Allen & Babin, 2013; Jacks & Robin, 2012). Allen and Babin (2013) referenced guilt as a possible emotion experienced by a parent of a child with childhood apraxia of speech (CAS). Research shows some anxiety and stress can be dispelled when parents are surrounded by the companionship of others who are experiencing similar difficulties with their own children (Connolly & Gersch, 2013; Leung, Leung, & Fong, 2013). Seeking others who are experiencing similar problems for solace and information can be a way to relieve the grief and health concerns of parents of special education children in general and specifically speech impaired children. However, participants in the current study were cautious about this type of support. This trepidation was evident in responses across all three types of questions: the ranking question, pertinent Likert scale questions, and the open-ended question. In response to the open-ended question as to what should be included in the proposed website one respondent stated: “The material should be presented from accredited sources. My concern with other families providing information is that it is not always accurate”. Another respondent added “Ensure the community is monitored by licensed SLPs”. This caution also surfaces in the answers to questionnaire question 19 **(**Could an interactive website devoted to parents of children with suspected or diagnosed speech impairment become a venue for peer (parent-to-parent) counseling?). One subject responded “strongly disagree”. This was the only time that a subject used this answer choice in response to any of the Likert scales. A similar cautiousness was echoed by Oprescu, Campo, Lowe, Andsager, and Morcuende (2013) when they noted many OSGs may not have designated links to medical or research-based information and advice coupled with real-life experiences of families of children with special needs. This lack of complete and accurate information may be misleading for parents seeking help via the Internet.

Research question 4. What did speech therapy personnel involved with the diagnosis, management, and treatment of speech impaired (SI) children perceive as essential to be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of information (e. g., therapy/resource options, prognostic guidance, and access to information)? An area of need for parents suspecting their child has a speech impairment is the securing of information. Research shows when parents are confronted by unfamiliar forces which effect their children, they may experience anxiety. According to the Uncertainty Management Theory (UMT) this anxiety or uncertainty can be assuaged or managed by information seeking (Brashers, 2001). A qualitative study by Bingham et al. (2012) chronicled six mother's reactions to their child's diagnosis of a developmental delay (DD), which can include language delays. As coping mechanisms, every one of the mothers utilized seeking information. Information is vital to parents of children with suspected SI. They are seeking someone to either validate or negate their suspicions. The person with that information is an SLP. After the diagnosis they must decide if they want private therapy, school-based therapy, or a combination of the two. If they seek private therapy, they must find information about funding. If school-based therapy is chosen they must obtain information about how to navigate through that system which can be daunting at times (Mueller, Singer, & Draper, 2008). Once the SI is diagnosed and the child is receiving speech therapy the parent must seek information as to what to do at home to reinforce therapy. A meta-analysis by Roberts, Kaiser, Oetting, and Hadley (2012) revealed: (a) interventions should focus on social communicative interactions between parents and children, (b) parents should be taught to increase their use of specific linguistic forms through models and expansions, (c) parents should be trained at home and across everyday routines, (d) parent-implemented interventions may be effective for children with a range of intellectual and language skills, and (e) training parents about once per week may be sufficient to improve child language outcomes. The authors found parents who were privy to the aforementioned information interacted with their children to produce improved language skills of a quantity and quality superior to those who did not. Present study participants felt this was the greatest area of need for parents as indicated by their responses to all three types of questions: open-ended, ranking, and Likert.

Recommendations for Practice

Technological advances, specifically the Internet and social media networks, facilitate the membership in online support groups (OSG) for parents of children with disabilities. Mohd Roffeei, Abdullah, and Basar (2015) took the opportunity to access such virtual assemblages, two Malaysian autism support groups, to analyze posts from their Facebook forums. The participants in Oprescu's et al.'s (2013) study contacted their peers through an online group to access emotional support and informational guidance needed due to their child's clubfoot.

The findings of this study are important for anyone who would be interested in creating an interactive dedicated website devoted to parents of children with suspected SI or diagnosed SI. Individuals who are interested in creating such a website might take note of the key areas respondents deemed as important (information, tangible assistance, and support) and incorporate them in such a website. An individual with such aspirations is encouraged to pursue three actions: consider including this information from the present study; examine the content of websites devoted to parents of children with disabilities; and, learn the mechanics of creating a website. An example of a website to examine is *Love that Max* (Seidman, 2019). Max Seidman's life subsequent to an intercranial hemorrhage at birth and resulting cerebral palsy (CP) has been faithfully chronicled by his mother, Ellen, since 2009. It is a source of information for parents of children with CP as well as a forum by which parents may discuss their joys and sorrows with an empathetic audience. Resources from which the aspiring website creator may learn are articles offering recommendations for websites builders such as one compiled by *PC Magazine* (Muchmore, 2019) and handbooks explaining the creation of a website such as *Building a Website for Dummies* (Crowder, 2010). Additionally, considering what the present case study's stakeholders deemed as necessary for such an endeavor may be helpful in the construction of this type of website. For example, most of the respondents of the current study indicated that such a website should offer information about the diagnosis of a speech impairment.

Recommendation for Future Research

The present study provided novel information to a here to fore unexamined area of research: what should be included in a dedicated website devoted to parents of children with suspected SI or diagnosed SI regarding components of service, coordinated service, support from other parents, and components of information. However, the present study only elicited answers from SLPs. This research could be expanded by replicating the data collection process with a sample of parents of children with diagnosed or suspected SI. A further area of study would then be to compare the answers of the two groups.

It would also be interesting to replicate this study with a larger population of SLPs. This researcher made an earnest effort to recruit subjects by contacting 1000 SLPs with only a 2.3% return rate. ASHA holds an annual convention with thousands of attendees. Perhaps this event could be a venue for eliciting participation with the present sur questionnaire's instrument.

Conclusions

Online websites can provide support to parents of children with disabilities (Chung, 2013; Kozlowski et al., 2014; Lemma & Fonagy, 2013; Leung, Leung, & Fong, 2013; Patterson et al., 2013). They can serve as a virtual community or OSG for these parents offering information and advice. There is a dearth of such a resource for parents of children with SI. The current study elicited questionnaire responses from authentic, credible research participants- SLPs. They provided suggestions and opinions as to what should be included on a dedicated website for parents of children with suspected or diagnosed SI which is devoted to speech therapy diagnoses and prognoses, general information, and reinforcement techniques of skills garnered through speech therapy. Emergent themes from the questionnaire data were compared with responses from previous social science studies (Cutrona and Suhr, 1992; Mohd Roffeei, Abdullah, and Basar, 2015). Three common themes from these earlier studies were also found in the present study: information seeking/information; networking; and, locating tangible assistance. An unexpected theme also emerged. Some respondents were wary about the interaction between parents without the supervision of an SLP. The concern in this case was that the parent seeking guidance would be given inaccurate information. An interested party, such as a parent or a SLP, who may want to develop an OSG for parents of SI children are invited to use the results of this study as a possible source of information for the construction of such a website.

References

Allen, J., & Marshall, C. R. (2011). Parent-child interaction therapy (PCIT) in school aged children with specific language impairment. *International Journal of Communication Disorders, 46*(4) 397-410.

Allen, L. F., & Babin, E. A. (2013). Associations between caregiving, social support, and well-being among parents of children with childhood apraxia of speech. *Health Communication, 28*, 568-576.

Alat, K. (2017). The use of online parent support groups by parents of children with autism. *Electronic Turkish Studies, 12*(33), 67-80.

American Psychiatric Association. (2013). *Autism spectrum disorder fact sheet.* Retrieved from http://www.dsm5.org/Documents/Autism%20Spectrum%20Disorder%20Fact%20Sheet.pdf

American Speech-Language-Hearing Association. (2005). *Position statement*. Retrieved from http://www.asha.org/practice/telepractice/

American Speech-Language-Hearing Association. (2012). *Bullies likelier to target students with speech-language disorders: Speech-language pathologists positioned to help.* Retrieved from http://www.asha.org/About/news/Press-Releases/2012/Bullies-Likelier-To-Target-Students-With-Speech-Language-Disorders.htm

American Speech-Language-Hearing Association. (2016a). *2015 Work life survey. CCC-SLP survey summary report: Number and type of responses*. Retrieved from: http://www.asha.org.

American Speech-Language-Hearing Association. (2016b). *Scope of practice in speech-language pathology.* Rockville, MD: Author. doi:10.1044/policy. SP2016-00343

American Speech-Language-Hearing Association. (2017). *Speech and language disorders and diseases.* Retrieved from: http://www.asha.org/public/speech/disorders/

American Speech-Language-Hearing Association. (2018). *Speech-language pathology certification handbook.* Retrieved from: https://www.asha.org/uploadedFiles/SLP-Certification-Handbook.pdf

American Speech-Language-Hearing Association. (n.d.a). *About health insurance.* Retrieved from http://www.asha.org/public/coverage/

American Speech-Language-Hearing Association. (n.d.b). *How does your child hear and* *talk?* Retrieved from http://www.asha.org/public/speech/development/chart/

Aras, I., Stevanovic, R., Vlahovic, S., Stevanovic, S., Kolaric, B., & Kondic, L. (2014). Health related quality of life in parents of children with speech and hearing impairment. *International Journal of Pediatric Otorhinolaryngology, 78,* 323-329.

Ardito, S. C. (2013). Seeking consumer health information on the Internet. *Online Searcher, 37*(4), 45-48.

Bachner, Y. G., Carmel, S., Lubetzky, H., Heinman, N., & Galil, A. (2006). Parent-therapist communication and satisfaction with their services of a child development centre: A comparison between Israeli parents – Jews and Bedouins. *Health Communication,19,* 221–229.

Ballou, J. (2011). Open-ended questions. In P. J. Lavrakas (Ed.). *Encyclopedia of survey research methods* (p. 547). Thousand Oaks, CA: Sage Publications, Inc.

Banach, M., & Course, L. J. (2012). Interdisciplinary co-facilitation of support groups for parents of children with autism. *Social Work with Groups, 35*(4), 313-329.

Batshaw, M. L., Roizen, N. J., & Lotrecchaiano, G. R. (2014). *Children with disabilities* (7th ed.). Baltimore, MD: Brookes Publishing Co.

Baxendale, J., & Hesketh, A. (2003). Comparison of the effectiveness of the Hanen Parent Programme and traditional clinic therapy. *International Journal of Communication Disorders, 38*(4), 397-415.

Beauregard, F. (2011). Practices adopted by parents of children with dysphasia in inclusive primary school. *Exceptionality Education International, 21*(3), 15–33.

Beck, C. T. (2009). Critiquing qualitative research. *AORN Journal, 90*(4), 543-554. doi:10.1016/j.aorn.2008.12.023

Bennett, T. A., Szatmari, P., Georgiades, K., Hanna, S., Janus, M., Georgiades, S.,…The Pathways in ASD Study Team. (2014). Language impairment and early social competence in preschoolers with autism spectrum disorders: A comparison of DSM-5 profiles. *Journal of Autism and Developmental Disorders, 44,* 2797-2808. DOI 10. 10007/s10803 014-2138-2

Bingham, A., Correa, V. I., & Humber, J. J. (2012). Mothers' voices: Coping with their children's initial disability diagnosis. *Infant Mental Health Journal, 33*(4), 272-385.

Birmingham, A., & Krapp, G. P. (1922). *First lessons in speech improvement.* New York, NY: Charles Scribner's Sons.

Blood, G. W., Blood, I. M., Tramontana, G. M., Sylvia, A. J., Boyle, M. P., & Motzko, G. R. (2011). Self-reported experience of bullying of students who stutter: Relations with life satisfaction, life orientation, and self-esteem. *Perceptual and Motor Skills, 113*(2), 353-364.

Bloom, L. (1973). *One word at a time: The use of single word utterances before syntax.* The Hague, Netherlands: De Gruyter Mouton.

Bojczyka, K. E., Davisb, A. E., & Ranab, V. (2016). Mother–child interaction quality in shared book reading: Relation to child vocabulary and readiness to read. *Early Childhood Research Quarterly, 36,* 404–414.

Brannon, D., & Dauksas, L. (2012). Studying the effect dialogic reading has on family members' verbal interactions during shared reading. *SRATE Journal, 21*(2), 9-20.

Brashers, D. E. (2001). *Communication and uncertainty management. Journal of Communication, 51(3), 477-497.*

Brassard, M. R., & Boehm A. E. (2014). *Preschool assessment: Principles and practices.* New York, NY: Guildford Press.

Breznitz, Z., & Sherman, T. (1987). Speech patterning of natural discourse of well and depressed mothers and their young children. *Child Development, 58,* 395-400.

Brown, R. (1973). *A first language: The early stages.* Cambridge, MA: Harvard University Press.

Bureau of Labor Statistics, U.S. Department of Labor. (2014). *Occupational outlook handbook (2014-15 ed.).* (Speech-language pathologists). Retrieved from http://www.bls.gov/ooh/healthcare/speech-language-pathologists.htm

Campbell, D. T, & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research.* Boston, MA: Houghton Mifflin Company.

CDC. (2017a). *Hearing loss in children: Data and statistics.* Retrieved from *https://www.cdc.gov/ncbddd/hearingloss/data.html*

CDC. (2017b). *Occurrence.* Retrieved from https://www.cdc.gov/ncbddd/birthdefects/cleftlip.html

Center for Parent Information and Resources (2014). *Speech and language impairments*. Retrieved from http://www.parentcenterhub.org/repository/speechlanguage/#def

Cherry, K. (2016). *Lev Vygotsky biography.* Retrieved from https://www.verywell.com/lev-vygotsky-biography-2795533

Chomsky, N. (1985). *The logical structure of linguistic theory.* Chicago, IL: The University of Chicago Press.

Chomsky, N. (2006). *Language and the mind* (3rd ed.). New York, NY: Cambridge University Press.

Chung, J. E. (2013). Social interaction in online support groups: Preference for online social interaction over offline social interaction. *Computers in Human Behavior*, *29*(4), 1408-1414. DOI: 10.1016/j.chb.2013.01.019.

Clifford, T., & Minnes, P. (2013a). Logging on: Evaluating an online support group for parents of children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 43*(97), 1662-1675.

Clifford, T., & Minnes, P. (2013b). Who participates in support groups for parents of children with autism spectrum disorders? The role of beliefs and coping style. *Journal of Autism and Developmental Disorders, 43*(1), 179-187.

Connolly, M., & Gersch, I. (2013). A support group for parents of children on a waiting list for an assessment for autism spectrum disorder. *Educational Psychology in Practice, 29*(3), 293-308.

Coufal, K., Parham, D., Jakubowitz, M., Howell, C., & Reyes, J. (2018). Comparing traditional service delivery and telepractice for speech sound production using a functional outcome measure. *American Journal of Speech-Language Pathology, 27,* 82-90. doi:10.1044/2017_AJSLP-16-0070

Cozby, P. C., & Bates, S. C. (2012). *Methods in behavioral research* (11th ed.). New York, NY: McGraw Hill Companies.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Cutrona, C. E., & Suhr, J. A. (1992). Controllability of stressful events and satisfaction with spouse support behaviors. *Communication Research, 19*(2), 154-174.

Crowder, D. (2010). *Building a web site for dummies* (4th ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Czaja, S. J. (2015). Can technology empower older adults to manage their health? *Generations 39*(1), 46-51.

Down syndrome: Parents sharing. (2016). *Down syndrome: Parent sharing.* Retrieved from http://downsyn.com/joomla/

Duchan, J. F. (2010). The early years of language, speech and hearing services in U S schools. *Language, Speech, and Hearing Services in Schools, 41*, 152-160. doi:10.1044/0161-1461

Dyregrov, K., Dyregrov, A., & Johnsen, I. (2013). Positive and negative experiences from grief group participation: A qualitative study. *Omega: Journal of Death and Dying, 68*(1), 45-62.

Education for All Handicapped Children's Act of 1975 (Public Law 94-142).

Farrant, B. M. (2012). Joint attention and parent-child book reading: Keys to help close gaps in early language development, school readiness, and academic achievement. *Family Matters, 92*, 38-46.

Fey, M. E., Cleave, P. L., Long, S. H., & Hughes, D. (1993). Two approaches to the facilitation of grammar in children with language impairment: An experimental evaluation. *The Volta Review, 112*(3), 227-242.

Fielding, J., & Gilbert, N. (2012). *Understanding social statistics* (2nd ed.). London, GBR: Sage Publications Ltd.

Fielding-Barnsley, R., & Hay, I. (2012). Comparative effectiveness of phonological awareness and oral language intervention for children with low emergent literacy skills. *Australian Journal of Language and literacy, 35*(3), 271-286.

Fitzpatrick, E., Angus, D., Durieux-Smith, A., Graham, I. D., & Coyle, D. (2008). Parents' needs following identification of childhood hearing loss. *American Journal of Audiology, 17,* 38-49.

Folkman, S., & Lazarus, R. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Behavior, 21*, 466-475.

Folkman, S., & Lazarus, R. (2005). *Ways of coping questionnaire.* Retrieved from http://www.mindgarden.com/products/wayss.htm

Foody, C., James, J. E., & Leader, G. (2014). Parenting stress, salivary biomarkers, and ambulatory blood pressure in mother of children with autism spectrum disorders. *Research in Autism Spectrum Disorders, 8*(2), 99-110.

Fowler, F. J., Jr. (2017). *Survey research methods* (5th ed.). Thousand Oaks, CA: Sage Publications, Inc.

Friehe, M. J., Bloedow, A., & Hesse, S. (2003). Counseling families of children with communication disorders. *Communication Disorders Quarterly, 24*(4), 211-220.

Furlong, L., Erickson, S., & Morris, M. E. (2017). Computer-based speech therapy for childhood speech sound disorders. *Journal of Communication Disorders, 68,* 50-69.

Gallagher-Thompson, D., Tzuang, Y. M., Au, A., Brodaty, H., Charlesworth, G., Gupta, R., Lee, S. E., Losada, A., & Shyu, Y. (2012). International perspectives on non-pharmacological best practices for dementia family caregivers: A review. *Clinical Gerontologist,* 35(4), 316-355.

Gath, A. (1979). Parents as therapists of mentally handicapped children. *Journal of Child Psychology and Psychiatry, 20,* 161-165.

Gibbard, D., & Smith, C. (2016). A transagency approach to enabling access to parent-based intervention for language delay in areas of social disadvantage: A service evaluation. *Child Language Teaching and Therapy, 2*(1), 19-33.

Gillam, S. L., & Kamhi, A. G. (2012). Specific language impairment. In J. S. Damico, N. Müller, & M. J. Ball (Eds.), *Handbook of language and speech disorders* (p.210). West Sussex, GB: Wiley-Blackwell.

Girolametto, L. E., Greenberg, J., & Manolson, H. A. (1986). Developing dialogue skills: The Hanen Early Language Parent Program. *Seminars in Speech and Language*, *7*, 367–382.

Glaser, B. G., & Strauss, A. L. (1965). *Awareness of dying.* Piscataway, NJ: Aldine Transaction Publishers.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory.* New York, NY: Routledge.

Glaser, B. G. (2004). Naturalist inquiry and grounded theory. *Forum: Qualitative Social Research, 5*(1). Retrieved from: http://www.qualitative-research.net/index.php/fqs/article/view/652/1412%26gt

Glennen, S. (2017). Interprofessional education: Co-located services, not just classwork. *The ASHA Leader, 22*(10), 50-54.

Glidden, L. M., Billings, F. J., & Jobe, B. M. (2006). Personality, coping style, and well-being of parents rearing children with developmental disabilities. *Journal of Intellectual Disability Research, 50*, 949–962.

Glidden, L.M., & Natcher, A.L. (2009). Coping strategy use, personality, and adjustment of parents rearing children with developmental disabilities. *Journal of Intellectual Disability Research, 53*(12), 998–1013.

Glogowska, M. (1998). Parents' beliefs and ideas about children's early speech and language difficulties. *International Journal of Language and Communication Disorders, 33,* 24-38.

Glogowska, M. (2002). *Time to talk: Parents' accounts of children's speech difficulties.* Philadelphia, PA: Whurr Publishers Ltd.

Glogowska, M., & Campbell, R. (2000). Investigating parental views of involvement in pre-school speech and language therapy. *International Journal of Language and Communication Disorders, 35*(3), 391-405.

Glogowska, M., Campbell, R., Peters, T. J., Roulstone, S., & Enderby, P. (2001). Developing a scale to measure parental attitudes toward preschool speech and language therapy services. *International Journal of Language and Communication Disorders, 36*(4), 503-513.

Goddard, M. J. (2015). Upon further reflection—The affinity of Noam Chomsky and B. F. Skinner. *Review of General Psychology, 19*(2), 140–145

Gregl, A., Kirigin, M., Bilać, S., Ligutić, R. S., Jakšić, N., & Jakovljević, M. (2014). Speech comprehension and emotional/behavioral problems in children with specific language impairment (SLI). C*ollegium Antropologicum, 38*(3), 871-877.

Grimaldi, M. (2012). Toward a neural theory of language: Old issues and new perspectives. *Journal of Neurolinguistics, 25*(5), 304-327.

Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation.* San Francisco, CA: Jossey-Bass.

Günther. T., & Hautvast, S. (2010). Addition of contingency management to increase home practice in young children with a speech sound disorder. *International Journal of Communication Disorders, 45*(3), 345-353.

Guo, Y., Dynia, J. M., Logan, J. A. R., Justice, L. M., Breit-Smith, A., & Kaderavek, J. N. (2016). Fidelity of implementation for early-literacy intervention: Dimensionality and contribution to children's intervention outcomes. *Early Childhood Research Quarterly, 37,* 165-174.

Guo, Y., & Goh, K. H. (2014). ''I have AIDS'': Content analysis of postings in HIV/AIDS support group on a Chinese microblog. *Computers in Human Behavior, 34,* 219-226. DOI: 10.1016/j.chb.2014.02.003.

Haley, M., Hammond, H., Ingalls, L., & Marin, M. R. (2013). Parental reactions to the special education individual education program process: Looking through the lens of grief. *Improving Schools, 16*(3), 232-243.

Halfon, N., Houtrow, A., Larson, K., & Newacheck P. W. (2012). The changing landscape of disability in childhood. *Future of Children, 22*(1), 13-42.

Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore, MD: Brookes Publishing Co.

Hart, B., & Risley, T. R. (1999). *The social world of children: Learning to talk.* Baltimore, MD: Brookes Publishing Co.

Hart, B., & Risley, T. R. (2003). The early catastrophe: The 30 million word gap by age 3. *American Educator, 27,* 4-9.

Sage Publications Limited (Producer). (2017). Allyson Holbrook discusses questionnaire design [Video]. Available from http://methods.sagepub.com.proxy1.ncu.edu/video/allyson-holbrook-discusses-questionnaire-design

Horst, S. J., & Pyburn, E. M. (2018). Likert scaling. In B. B. Frey (Ed), *The Sage encyclopedia of educational research, measurement, and evaluation.* Thousand Oaks, CA: Sage Publications, Inc. Retrieved from http://methods.sagepub.com.proxy1.ncu.edu/reference/the-sage-encyclopedia-of-educational-research-measurement-and-evaluation/i12634.xml

Individuals with Disabilities Education Act (IDEA), 20 U.S.C. § 1400 (2004).
Jacks, A., & Robin, D. A. (2012). Apraxia of speech. In J. S. Damico, N. Müller, & M. J. Ball (Eds.), *Handbook of language and speech disorders* (p.391). Somerset, NJ: Wiley-Blackwell.

Jensen, D. (2008). Dependability. In L. M. Given (Ed.), *The Sage encyclopedia of qualitative research methods* (p. 209). Thousand Oaks, CA: Sage.

Jensen, D. (2008). Transferability. In L. M. Given (Ed.), *The Sage encyclopedia of qualitative research methods* (p. 886). Thousand Oaks, CA: Sage.

Johnson, R. B. (1997). Examining the validity structure of qualitative research. *Education, 118*(2), 282-292.

Judge, S. L. (1998). Parental coping strategies and strengths in families of young children with disabilities. *Family Relations, 47*(3), 263-268.

Kellehear, A. (2014). *On death and dying: Dr. Elisabeth Kübler-Ross and the five stages of grief*. Retrieved from http://www.ekrfoundation.org/five-stages-of-grief/

King, G., King, S., Rosenbaum, P., & Goffin, R. (1999). Family-centered caregiving and well-being of parents of children with disabilities: Linking process with outcome. *Journal of Pediatric Psychology, 24*(1), 41-53.

King, S., Rosenbaum, P. L., & King, P. (1996). Parents' perceptions of caregiving: Development and validation of a measure of processes. *Developmental Medicine and Child Neurology, 38*(9), 757-772.

Ko, H., Wang, L., & Xu, Y. (2013). Understanding the different types of social support offered by audience to a-list diary-like and informative bloggers. *Cyberpsychology, Behavior and Social Networking, 16*(3), 194–199.

Kozlowski, D., Provost, S. C., Tucker, J., & van der Zwan, R. (2014). Dusted community: Piloting a virtual peer-to-peer support community for people with an asbestos-related diagnosis and their families. *Journal of Psychosocial Oncology, 32*(4), 463-475.

Krohling, L. L., de Paula, K. M. P., & Behlau, M. S. (2015). Behavior, social competence, and voice disorders in childhood and adolescence. *Journal of Voice.* DOI: 10.1016/j.jvoice.2015.08.005

Lalvani, P. (2015). Disability, stigma and otherness: Perspectives of parents and teachers. *International Journal of Disability, Development and Education, 62*(4), 379-393.

Lemma, A., & Fonagy, P. (2013). Feasibility study of a psychodynamic online group intervention for depression. *Psychoanalytic Psychology, 30*(3), 367-380.

Leung, C., Leung, J., & Fong, W. (2013). Outcome evaluation of peer support programme for helping Chinese parents under stress. *Asia Pacific Journal of Social Work and Development, 23*(3), 168-182.

Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry.* Beverly Hills, CA: Sage Publications, Inc.

Lindsay, G., Dockrell, J. E., & Strand, S. (2007). Longitudinal patterns of behavior problems in children with specific speech and language difficulties: Child and contextual factors. *British Journal of Education Psychology, 77,* 811-828.

Lovelace, S, & Stewart, S. R. (2007). Increasing print awareness in preschoolers with language impairment using non-evocative print referencing. *Language, Speech & Hearing Services in Schools, 38*(1), 16-30.

Luterman, D. M. (1991). *Counseling the communicatively disordered and their families* (2nd ed.). Austin, TX: Pro-Ed.

Luterman, D. M. (2015). Being truly family centered. *ASHA Leader, 20,* 96.

Luterman, D. M. (2017). *Counseling the communicatively disordered and their families* (6th ed.). Austin, TX: Pro-Ed.

Maggio, V., Granana, N. E., Richaudeau, A., Torres, S., Giannotti, A., & Suburo, A., M. (2014). Behavior problems in children with specific language impairment. *Journal of Child Neurology, 29*(2), 194-202.

Martin, J. A., Hamilton, B. E., Osterman, M.J. K., Driscoll, A. K., & Drake, P. (2018). Births: Final data for 2016. *National Vital Statistics Reports 67*(1),1-54. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr67_01.pdf

Mayer, M. (1987). *There's an alligator under my bed.* New York, NY: Dial.

McConkey, R. (1979). Reinstating parental involvement in the development of communication skills. *Child: Care, Health, and Development*, *5*(1). 17-27.

McIver, J. P., & Carmines, E. G. (2011). *Unidimensional scaling.* Thousand Oaks, CA: Sage Publications, Inc.

McKean, K., Phillips, B., & Thompson, A. (2012). A family-centred model of care in paediatric speech-language pathology. *International Journal of Speech-Language Pathology, 14*(3), 235-246. DOI: 10.3109/17549507.2011.604792

McLeod, S., Harrison, L. J., McAllister, L., & McCormack, J. (2013). Speech sound disorders in a community study of preschool children. *American Journal of Speech-Language Pathology, 22*(3), 503-522.

Michal, A., & Shah, P., (2018). Bar graphs. In B. B. Frey (Ed.). *The Sage encyclopedia of educational research, measurement, and evaluation* (p. 169). Thousand Oaks, CA: Sage Publications, Inc.

Mohd Roffeei, S. H., Abdullah, N., & Basar, S. K. R. (2015). Seeking social support on Facebook for children with autism spectrum disorders (ASDs). *International Journal of Medical Informatics, 84*(5), 375–385.DOI 10.1016/j.ijmedinf.2015.01.015

Muchmore, M. (2019). The best website builders for 2019. *PC Magazine Digital Edition.* Retrieved from https://www.pcmag.com/roundup/334639/the-best-website-builders

Mueller, T. G., Milian, M., & Lopez, M. I. (2009). Latina mothers' view of a parent-to-parent support group in the special education system. *Research and Practice for Persons with Severe Disabilities, 34*(3/4), 113-122.

Mueller, T. G., Singer, G. H. S., & Draper, L. M. (2008). Reducing parental dissatisfaction with special education in two school districts: Implementing conflict prevention and alternative dispute resolution. *Journal of Educational and Psychological Consultation, 18*(3), 191-233.

National Center for Educational Statistics. (2017). *The condition of education: Children and youth with disabilities.* Retrieved from: https://nces.ed.gov/programs/coe/indicator_cgg.asp

Oprescu, R., Campo, S., Lowe, J., Andsager, J., & Morcuende, J. A. (2013). Online information exchanges for parents of children with a rare health condition: Key findings from an online support community. *Journal of Medical Internet Research, 15*(1), 250-258.

Pasold, T. L., Boateng, B. A., & Portilla, M. G. (2010). The use of parent support group in the outpatient treatment of children and adolescents with eating disorders. *Eating Disorders, 18*(4), 318-332.

Patterson, B. L., Brewer, J., & Stamler, L. L. (2013). Engagement of parents in on-line social support interventions. *Journal of Pediatric Nursing, 28*(2), 114-124. DOI: 10.1016/j.pedn.2012.05.001

Peters, K., Chen, Y., Kaplan, A. M., Ognibeni, B., & Pauwels, K. (2013). Social media metrics- A framework and guidelines for managing social media. *Journal of Interactive Marketing, 27*(4), 281-298.doi: 10.1016/j.intmar.2013.09.007

Peterson, R. A. (2013). *Constructing effective questionnaires*. Thousand Oaks, CA: Sage Publications, Inc.

Piaget, J. (1926). *The language and thought of the child* (M. Warden, Trans.). New York, NY: Harcourt, Brace, and Company, Inc.

President and fellows of Harvard College. (2016). *Harvard Graduate School of Education- Catherine Snow.* https://www.gse.harvard.edu/faculty/catherine-snow

Real, K., & Street, Jr., R. L. (2009). Doctor-patient communication from an organizational perspective. In D. E. Brashers & D. Goldsmith (Eds.) *Managing health and illness* (pp. 65-90). New York, NY: Taylor and Francis Publishers.

Reitzes, P. (2014). The powered up parent. *ASHA Leader, 19*(7), 50-56.

Roberts, M. Y., & Kaiser, A. P. (2011). The effectiveness of parent-implemented language interventions: A meta-analysis. *American Journal of Speech-Language Pathology, 20*(3), 180-199.

Roberts, M. Y., Kaiser, A. P., Oetting, J., & Hadley, P. (2012). Assessing the effects of parent-implemented language intervention for children with language impairments using empirical benchmarks: A pilot study. *Journal of Speech, Language and Hearing Research, 55*(6), 1655-1670.

Rollin, W. J. (2000). *Counseling individuals with communication disorders:*

Psychodynamic and family aspects (2^{nd} ed.). Boston, MA: Butterworth-Heinemann.

Romero-Contreras, S. (2015). Enhancing children's communication through parent-implemented language therapy. *Childhood Education, 91*(4), 274-282. DOI: 10.1080/00094056.2015.1069157

Romski, M. A., Sevick, R. A., Smith, A., Cheslock, M., & Bakemana, R. (2011). Parent perceptions of the language development of toddlers with developmental delays before and after participation in parent-coached language intervention. *American Journal of Speech-Language Pathology, 20*(2), 111-118.

Rudolph, M., Rosanowski, F., Eysholdt, U., & Kummer, P. (2003). Anxiety and depression in mothers of speech impaired children. *International Journal of Pediatric Otorhinolaryngology, 67*, 1337—1341.

Salganik, M. (2014). *The Belmont Report: Three principles for ethical research.* Retrieved from https://msalganik.wordpress.com/2014/07/29/the-belmont-report-three-principles-for-ethical-research/

Sander, E, K. (1972). When are speech sounds learned? *Journal of Speech and Hearing Disorders, 37,* 55-63. doi:10.1044/jshd.3701.55

Sawyer, B. E., Justice, L. M., Guo, Y., Logan, J. A. R., Petrill, S. A., Glenn-Applegate, K., Kaderavek, J. N., & Pentimonti, J. M. (2014). Relations among home literacy environment, child characteristics and print knowledge for preschool children with language impairment. *Journal of Research in Reading, 37*(1), 65-78.

Schook, R. M., Linssen, C., Schramel, F. M., Festen, J., Lammers, E., Smit, E. F., Postmus, P. E., & Westerman, M. J. (2014). Why do patients and caregivers seek answers from the Internet and online lung specialists? A qualitative study. *Journal of Medical Internet Research, 16*(2), 1438-1471.

Schultz, D., Reynolds, K. A., & Sontag-Padilla, L. A. (2013). *Transforming systems for parental depression and early childhood developmental delays.* Arlington, VA: Rand Corporation.

Scott, R. L. (2012) Support groups for addicts. Encyclopedia of Health. Hackensack, NJ: Salem Press.

Seidman, E. (2019). *Love that Max.* Retrieved from https://www.lovethatmax.com/

Shapiro, J. K. (2011). Percentage frequency distribution. In P. J. Lavrakas (Ed.). *Encyclopedia of survey research methods* (p. 578). Thousand Oaks, CA: Sage Publications, Inc.

Sharifi, M., Dryden, E. M., Horan, C. M., Price, S., Marshall, R., Hacker, K., Finkelstein, J. A., & Taveras, E. M. (2012). Leveraging text messaging and mobile technology to support pediatric obesity-related behavior change: A qualitative study using parent focus groups and interviews. *Journal of Medical Internet Research, 15*(12), Retrieved from http://ehis.ebscohost.com/eds/detail?vid=2&sid=3b72644d-4ece-4f68-942d 9eac4cdfbbf6%40sessionmgr113&hid=106&bdata=JnNpdGU9ZWRzLWxpdmU%3d#db=edo&AN=93574270

Shavelson, R. J., & Towne, L. (Eds.). (2002). *Scientific research in education.* Washington, DC: Academy Press.

Shilling, V., Morris, C., Thompson-Coon, J., Ukoumunne, O., Rogers, M., & Logan, S. (2013). Peer support for parents of children with chronic disabling conditions: a systematic review of quantitative and qualitative studies. *Developmental Medicine and Child Neurology, 55*(7), 602-609.

Siller, M., Hutman, T., & Sigman, M. (2013). A parent-mediated intervention to increase responsive parental behaviors and child communication in children with ASD: A randomized clinical trial. *Journal of Autism and Developmental Disorders, 43,* 540-555.

Siller, M., & Sigman, M. (2002). The behaviors of parents of children with autism predict the subsequent development of their children's communication. *Journal of Autism and Developmental Disorders, 32,* 77–89.

Singer, G., Hornby, G., & Park, J. (2012). Parent to parent peer support across the Pacific Rim. *Journal of International Special Needs Education, 15*(2), 89-106.

Smith, A. L., Romski, M. A., Sevcik, R. A., Adamson, L. B., & Bakemana, R. (2011). Parent stress and its relation to parent perceptions of communication following parent-coached language intervention. *Journal of Early Intervention, 33*(2), 135-150.

Smith, L. (2000). *A brief biography of Jean Piaget.* Retrieved from http://www.piaget.org/aboutPiaget.html

Snow, C. (1983). Literacy and language: Relationships during the preschool years. *Harvard Educational Review, 53*(2), 165-189.

Sonik, R. A., Parish, S. L., Akobirshoev, I., Son, E., & Rosenthal, E. (2017). Population estimates, health care characteristics, and material hardship experience of U. S. children with parent-reported speech-language difficulties: Evidence from three nationally representative surveys. *Language, Speech, and Hearing Services in Schools, 48,* 286-293.

Squires, K. (2013). Addressing the shortage of speech-language pathologists in school settings. *Journal of the American Academy of Special Education Professionals*, 131-137.

Stake, R. E. (2006). *Multiple case study analysis*. New York, NY: Guilford Press.

Suskind, D., Leffel, K. R., Hernandez, M. W., Sapolich, S. G., Suskind, E., Kirkham, E., & Meehan, P. (2013). An exploratory study of “qualitative lingustic feedback”: Effect of LENA feedback on adult language production. *Communication Disorders Quarterly, 34*(4), 199-209.

Swift, M. C., Jones, M., O’Brian, S., Onslow, M., Packman, A., & Menzies, R., (2016). Parent verbal contingencies during the Lidcombe Program: Observations and statistical modeling of the treatment process. *Journal of Fluency Disorders, 47,* 13-16.

Swift, W. (1918). *Speech defects in school children and how to treat them.* New York, NY: Houghton Mifflin.

Tellis, C. M., & Barone, O. R. (2016). *Counseling and interviewing in speech-language pathology and audiology: A therapy resource.* Burlington, MA: Jones & Bartlett Learning.

Trajkovski, N., Andrews, C., & Packman, A. (2010). Parents as therapists in early stuttering intervention: Problem-solving for the speech pathologist. *ACQuiring Knowledge in Speech, Language and Hearing, 12*(2), 70-73.

US Department of Education. (2007). *A 25-year history of IDEA.* Retrieved from http://www2.ed.gov/policy/speced/leg/idea/history.html

Van Riper, C., & Erickson, R. (1995). *Speech correction: An introduction to speech pathology and audiology* (9th ed.). Upper Saddle River, NJ: Pearson.

Van Uden-Krann, C. R., Drossaert, C. H., Taal, E., Smit, W. M., Bernelot Moens, H. J., & Van der Laar, M. A. (2011). Determinants of engagement in face-to-face and online patient support groups. *Journal of Medical Internet Research, 13*(4), Retrieved from http://ehis.ebscohost.com/eds/detail?vid=4&sid=155093aa-13d6-4436-959f-644b736b938e%40sessionmgr4003&hid=4103&bdata=JnNpdGU9ZWRzLWxpdmU%3d#db=mnh&AN=22155649

Vernon-Feagans, L., Garrett-Peters, P., Willoughby, M., Mills-Koonce, R., & The Family Life Project Key Investigators. (2012). Chaos, poverty, and parenting: Predictors of early language development. *Early Childhood Research Quarterly, 27,* 339-351.

Vygotsky, L. S. (1986). *Thought and language* (A. Kozulin, Trans.). Cambridge, MA: The Massachusetts Institute of Technology.

Wood, A. (1984). *The napping house*. Orlando, FL: Harcourt, Inc.

Yin, R. K. (2004). *Case study methods*. Retrieved from http://www.cosmoscorp.com/Docs/AERAdraft.pdf

Appendix A: Invitation for Participants

Hello,
My name is Mary Ellen Denmon. I am a SLP. I also am a doctoral student in early childhood education. I attend Northcentral University. I am conducting a study entitled *Exploring an Online Support Group Devoted to Parents of Children with Speech Impairments: A Qualitative Multiple Case Study.* I hope the study will provide information needed to develop an online support group via an interactive website for parents of speech impaired (SI) children. Such a website might serve as a virtual or online support group for parents.

I hope to gather data via an online questionnaire. I would like to invite fellow ASHA members to participate in my study. As a way of thanking those who participate, there will be a gift card drawing. Those who provide contact information will be placed in a drawing for one of four $25 VISA cards.

If you choose to be in the study, the link to my Survey Monkey questionnaire is:
bit.ly/survey4SLP

Survey Monkey estimates that it will take seven minutes to complete the questionnaire.

Sincerely,
Mary Ellen Denmon, MA, CCC-SLP

Appendix B: Questionnaire

Building an Interactive Website for Parents of Speech Impaired Children

Introduction:
My name is Mary Ellen Denmon. I am a doctoral student at Northcentral University. I am conducting a research study to determine what information should be included on an online support group via an interactive website for parents of speech impaired (SI) children. Such a website might serve as a virtual or online support group for parents.
I am completing this research as part of my doctoral degree. Your participation is completely voluntary. I am seeking your consent to involve you and your information in this study. Reasons you might ***not*** want to participate in the study may include: a participant who has never completed an online questionnaire might feel anxious doing so. Reasons you might want to participate in the study include: there is no immediate benefit to you as a SLP professional or student. However, if you wish to be in the study and you provide me with your contact information (which will be held separately from your questionnaire results), your name will be entered into a drawing for one of four (4) $25 VISA gift cards. I am inviting 1000 people to participate in the study so your chance of being chosen is 1 in 250. I will contact you if you are chosen. An alternative to this study is simply not participating. I am here to address your questions or concerns during the informed consent process.

PRIVATE INFORMATION
Certain private information may be collected about you in this study. I will make the following effort to protect your private information, including storing any identifying information on a dedicated flash drive for seven years. Even with this effort, there is a chance that your private information may be accidentally released. The chance is small but does exist. You should consider this when deciding whether to participate.

Activities:
If you participate in this research, you will be asked to:

1. Answer a few questions about your years of experience as well as the settings where you have been employed and populations with which you have worked.
2. Answer questions in regards to what you believe should be included in an interactive website devoted to parents of speech impaired children.
3. Survey Monkey estimates completing the survey will take approximately 10 minutes.

Eligibility:
You are eligible to participate in this research if you:

1. Are a speech-language pathologist
2. Are a speech-language pathology student

You are not eligible to participate in this research if you:

1. Are not a speech-language pathologist
2. Are not a speech-language pathology student

I hope to include 1000 people in this research.

Risks:

There are minimal risks in this study. Some possible risks include: a potential risk or discomfort may be that a participant who has never completed an online questionnaire might feel anxious doing so.

To decrease the impact of these risks, you can: skip any question, and/or, stop participation at any time.

Benefits:

If you decide to participate, there are no direct benefits to you.

The potential benefits to others are: a SLP may take this information and create a website that can be an online support group for parents of children with speech impairment.

Compensation/Incentives:

To thank you for your willingness to participate, you will be given a chance to be chosen as the recipient of one of four (4) $25 VISA gift cards.

Confidentiality:

The information you provide will be kept confidential to the extent allowable by law. Some steps I will take to keep your identity confidential are: storing any identifying information on a dedicated flash drive for seven years.

The people who will have access to your information are: myself, and/or, my dissertation chair. The Institutional Review Board may also review my research and view your information.

I will secure your information with these steps: the aforementioned flash drive will be stored in a locked, fireproof strongbox.

I will keep your data for 7 years. Then, I will delete electronic data.

Contact Information:

If you have questions for me, you can contact me at: M.Denmon3669@email.ncu.edu

My dissertation chair's name is Dr. Rebecca Collins. She works at Northcentral University and is supervising me on the research. You can contact her at: rcollins@ncu.edu.

If you contact us you will be giving us information like your phone number or email address. This information will not be linked to your responses if the study is anonymous.

If you have questions about your rights in the research, or if a problem has occurred, or if you are injured during your participation, please contact the Institutional Review Board at: irb@ncu.edu or 1-888-327-2877 ext 8014.

Voluntary Participation:

Your participation is voluntary. If you decide not to participate, or if you stop participation after you start, there will be no penalty to you. You will not lose any benefit to which you are otherwise entitled.

Future Research

Any information or specimens collected from you during this research may **not** be used for other research in the future, even if identifying information is removed.

Checking "I Agree" below indicates your understanding of this consent form.

1.

☐ I agree

2.

This study is anonymous, and it is not the intention of the researcher to collect your name. However, you do have the option to provide your name voluntarily. Please know that if you do, it may be linked to your responses in this study. Any consequences are outside the responsibility of the researcher, faculty supervisor, or Northcentral University. If you do wish to provide your name, a space will be provided. Again, including your name is voluntary, and you can continue in the study if you do not provide your name.

____

Your name (optional)

3. Are you a speech-language pathology (SLP) student or professional?
   - ○ Student enrolled in a SLP program
   - ○ Practicing professional
   - ○ Taking time off from practicing
   - ○ Retired
   - ○ Other (please specify)

.

4. For SLP professionals: how long have you been providing/provided therapy services?
   - ○ Less than one year
   - ○ 1-4 years
   - ○ 5-9 years
   - ○ 10-19 years
   - ○ 20-29 years
   - ○ 30+ years

5. Which settings/populations have you worked at/with (check all that apply)?
   - ○ Early childhood intervention
   - ○ Preschool
   - ○ Elementary school
   - ○ Middle school
   - ○ High school
   - ○ Adult care
   - ○ Geriatric care
   - ○ Settings which served clients of a variety of ages
   - ○ Other (please specify)

.

6. How do you use the Internet in your practice (check all that apply)?
    - ○ Locating therapy activities
    - ○ Locating therapy materials
    - ○ Updating your professional knowledge
    - ○ Interacting with other professionals in the communication disordered community
    - ○ Purchasing therapy materials
    - ○ Purchasing services related to therapy (e. g., insurance)
    - ○ Finding information for your clients and their parents, and/or their significant others
    - ○ Interacting with clients
    - ○ Interacting with clients' parents
    - ○ Interacting with clients' significant others (e. g., caregivers other than parents, partners, siblings, children, spouses)
    - ○ Other (please specify)

.

7. Rank in order from greatest to least these needs a parent of a child with a suspected or diagnosed speech impairment may have. A need for:

☐ Information about how to find out if their child is speech impaired

☐ Locating financial help to pay for therapy services

☐ Locating local therapy providers

☐ Information about activities to reinforce therapy at home

☐ A venue to interact with other parents of children with speech impairment

8. How important is it for a parent who suspects their child has a speech impairment have access to speech/language developmental milestone explanations such as ASHA’s *How Does Your Child Hear and Talk?*

Not Important		Mildly Important		Moderately Important		Very Important		Extremely Important
☆		☆		☆		☆		☆

9. How important is it for a parent of a child with a suspected or diagnosed speech impairment to have access to information in regard to finding financial help to pay for therapy services?

Not Important		Mildly Important		Moderately Important		Very Important		Extremely Important
☆		☆		☆		☆		☆

10. How important is it for a parent of a child with a suspected or diagnosed speech impairment to have access to information in regard to finding local therapy providers?

Not Important		Mildly Important		Moderately Important		Very Important		Extremely Important
☆		☆		☆		☆		☆

11. How important is it for a parent of a child with a suspected or diagnosed speech impairment to have access to information about activities to reinforce therapy at home?

Not Important		Mildly Important		Moderately Important		Very Important		Extremely Important
☆		☆		☆		☆		☆

12. How important is it for a parent of a child with a suspected or diagnosed speech impairment to have the ability to interact with other parents of children with speech impairments?

Not Important		Mildly Important		Moderately Important		Very Important		Extremely Important
☆		☆		☆		☆		☆

13. What do you feel should be included in an interactive website devoted to parents of children with a suspected or diagnosed speech impairment?

14. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairments serve as an online support group for those parents?

Strongly Disagree		Mildly Disagree		Neither Agree or Disagree		Somewhat Agree		Strongly Agree
☆		☆		☆		☆		☆

15. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairments provide information regarding components of services (e. g., screening, therapy, audiology, social support, and funding support)?

Strongly Disagree		Mildly Disagree		Neither Agree or Disagree		Somewhat Agree		Strongly Agree
☆		☆		☆		☆		☆

16. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairments provide information regarding coordinated service (e. g., co-located services and team coordination)?

Strongly Disagree		Mildly Disagree		Neither Agree or Disagree		Somewhat Agree		Strongly Agree
☆		☆		☆		☆		☆

17. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairments provide information regarding support from other parents (e. g., organized through health services and through parents' groups)?

Strongly Disagree		Mildly Disagree		Neither Agree or Disagree		Somewhat Agree		Strongly Agree
☆		☆		☆		☆		☆

18. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairments provide information regarding support from components of information (e. g., therapy/resource options, prognostic guidance, and access to information)?

Strongly Disagree		Mildly Disagree		Neither Agree or Disagree		Somewhat Agree		Strongly Agree
☆		☆		☆		☆		☆

19. Could an interactive website devoted to parents of children with suspected or diagnosed speech impairments become a venue for peer (parent-to-parent) counseling?

Strongly Disagree		Mildly Disagree		Neither Agree or Disagree		Somewhat Agree		Strongly Agree
☆		☆		☆		☆		☆

20. Do you have any additional comments, ideas, or critiques?

If you wish to participate in the drawing for one (1) of four (4) $25 VISA cards please include your name/email address below. After the drawing any record of you contact information will be destroyed.
Your participation in the study is greatly appreciated!

Name

Email Address

Appendix C: Answers to the Opened-Ended Question

Information seeking (Oprescu's et al., 2013)/Informational (Cutrona & Suhr, 1992)

1. parents who have concerns that their child may have a speech/language impairment
2. resources for further information
3. access to do the exercises themselves how does it feel *[sic]*
4. developmental milestones
5. ideas to carry over therapy at home
6. faq (frequently asked questions)
7. information about different prompting strategies to elicit a target sound
8. information about choosing realistic targets (phonetic environment, length of utterance)
9. information about milestones, hierarchy of developmental skills (what is normal and what should be emerging)
10. dos and don'ts for therapy (ex. stuttering don't put them on the spot)
11. typical speech/language development
12. typical age for phoneme acquisition, milestones
13. information about diagnoses

    info about the IFSP/IEP process
14. evidence based treatment information
15. strategies to help at home

Network (Cutrona & Suhr, 1992)

1. discussion

2. local connections to help people find others in their community resources for connecting with a support group
3. access to others in similar situations with their children
4. mentoring from other parents
5. tips and tricks that parents and/or families submit to help provide real life examples for these families
6. a support group
7. local and community resources

Tangible Assistance (Cutrona & Suhr, 1992)

1. list of providers
2. links to specialist
3. perhaps volunteer "mentors" for specific disability/disorder categories
4. maybe an interactive messaging system with an SLP to answer ongoing questions
5. therapy providers
6. how to get evaluations and therapy covered by insurance
7. ability to contact an SLP to answer basic questions

Novel Category- Consumer Alert

1. The material should be presented from accredited sources. My concern with other families providing information is that it is not always accurate.
2. Ensure the community is monitored by licensed SLPs.