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Speech-Language Pathologists and Disaster Management: Team Roles

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Abstract

Purpose: Disaster management is a topic that is multi-faceted and intricately maintained by professionals who volunteer their expertise and time to assist those who have been affected by an unforeseen disaster. Creating a well-rounded and effective team is of immense importance during disaster situations. Speech-language pathologists can provide vital skills in the realm of communication, feeding, and other areas. However, the role of speech language pathologists within the disaster management team is not well documented in the literature. The purpose of the study was to identify awareness, involvement, and training of speech language pathologists in disaster management stages through exploration of their self-reported knowledge, skills, and roles to better understand their likelihood of response and potential collaborative roles within a disaster management team. Method: To gather data on self-reported awareness, knowledge, skills, participation, training, and perceptions of speech language pathologists as part of the disaster management stage, a cross-sectional survey study was designed. The study specifically targeted licensed speech language pathologists within the state of Florida. Results: There were 216 viable survey responses to analyze. Descriptive and correlational analyses were conducted to examine how speech-language professionals perceive their fit in the arena of disaster management. Speech language pathologists who responded to this survey were primarily white, 40–49-year-old females who had experienced some form of disaster. Most respondents reported receiving no training in disaster management; however, they indicated that speech language pathologists and other healthcare professionals have unique skills that could contribute to disaster management stages. Although there was reportedly limited training and guidance available and minimal professional experience with disaster, speech language pathologists who reported having professional experience with disaster stages, indicated an increased likelihood of participating in future disaster management. Conclusions: Similar to interdisciplinary teams found in clinical practice, healthcare professionals need training and education about their roles to form teams to address the needs of individuals in all disaster management stages. Analyses indicated that speech language pathologists perceive themselves, and other healthcare professionals, could provide meaningful contributions to the disaster management team; however, they have not had adequate professional experience or training.

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ABSTRACT

Purpose: Disaster management is a topic that is multi-faceted and intricately maintained by professionals who volunteer their expertise and time to assist those who have been affected by an unforeseen disaster. Creating a well-rounded and effective team is of immense importance during disaster situations. Speech-language pathologists can provide vital skills in the realm of communication, feeding, and other areas. However, the role of speech language pathologists within the disaster management team is not well documented in the literature. The purpose of the study was to identify awareness, involvement, and training of speech language pathologists in disaster management stages through exploration of their self-reported knowledge, skills, and roles to better understand their likelihood of response and potential collaborative roles within a disaster management team. **Method:** To gather data on self-reported awareness, knowledge, skills, participation, training, and perceptions of speech language pathologists as part of the disaster management stage, a cross-sectional survey study was designed. The study specifically targeted licensed speech language pathologists within the state of Florida. **Results:** There were 216 viable survey responses to analyze. Descriptive and correlational analyses were conducted to examine how speech-language professionals perceive their fit in the arena of disaster management. Speech language pathologists who responded to this survey were primarily white, 40–49-year-old females who had experienced some form of disaster. Most respondents reported receiving no training in disaster management; however, they indicated that speech language pathologists and other healthcare professionals have unique skills that could contribute to disaster management stages. Although there was reportedly limited training and guidance available and minimal professional experience with disaster, speech language pathologists who reported having professional experience with disaster stages indicated an increased likelihood of participating in future disaster management. **Conclusions:** Similar to interdisciplinary teams found in clinical practice, healthcare professionals need training and education about their roles to form teams to address the needs of individuals in all disaster management stages. Analyses indicated that speech language pathologists perceive themselves and other healthcare professionals, as individuals who could provide meaningful contributions to the disaster management team; however, they have not had adequate professional experience or training.

KEYWORDS: speech-language pathology, SLPs, interdisciplinary, disaster response, disaster management

INTRODUCTION

Communities and individuals impacted by a disaster, whether natural, manmade, or bioterrorism, have their lives devastated, causing disruption to their daily tasks and occupations. Disaster events have increased substantially, amounting to almost 1,600 events in 2018 and totaling more than 7,000 events globally from 2008-2018.[1]. These disaster events include both high and low-income countries, yet there are numerous underreported and uncounted small-scale events that also lead to disaster, displacement, and life disruption. Disaster and the often-accompanying displacement impact the individual, family, and community with ramifications for years to come.

Disaster management teams often take on uncommon roles while responding to disasters to accommodate the myriad of needs.[2] Thus, healthcare workers who are part of disaster management teams may regularly work outside of their scope of practice alongside other healthcare professionals to provide the most efficient and effective care possible to those impacted.[2] Taking this into consideration, it is essential for disaster management teams to be composed of workers who possess a wide variety of competencies and experiences. Due to the unusual roles taken during emergent situations, most healthcare professionals may not be adequately informed about how they can be of service in disaster management stages, or in what ways their unique skills can contribute. An example, documented by a national assessment in Canada, showed a pressing need for training in interdisciplinary competency and disaster management competency at all levels of education for healthcare professionals.[3] It is vital for individuals impacted by disaster that all medical professionals, including speech-language pathologists, the focus of this study, be aware of the potential contributions and roles they may have in disaster management stages.

The involvement of speech language pathologists is needed in disaster management as noted in the American Speech-Language Hearing Association (ASHA) discussion of their scope of practice.[4] This document details the framework, responsibilities, services, and duties that speech language pathologists uphold and provides information on the guiding principles of their profession. It is relevant to the current research study to note that emergency responsiveness is included in the duties of this profession, as well as prevention strategies and advocacy to promote effective communication, feeding, and swallowing.[4] Communication and feeding are two essential daily life functions, and disruption due to disaster has a significant impact on individuals with diverse communication and feeding needs.[6] Effective aid for persons with communication and feeding/swallowing challenges could provide positive support for individuals affected by disasters and create a healthier environment throughout all stages of disasters. While speech language pathologists have a unique set of skills to contribute to a disaster management team, which could produce a more holistic experience for those impacted by a disaster, on review of the literature, it was noted that a lack of information exists on the roles of speech language pathologists on disaster management teams.[6] Similarly, the Disaster Relief Medicaid and READI (Readying Elders and Americans with Disabilities Inclusively) for Disasters bills indicate the need for accessible services for those on Medicare and those with disabilities.[7,8]

The inclusion of speech language pathologists on the interdisciplinary team has not been well documented within disaster management. However, considering the responsibilities listed within the health profession's scope of practice, speech-language pathology has the potential to play a critical role. This study deployed a cross-sectional survey to identify awareness, involvement, and training related to disaster management of speech language pathologists actively licensed in Florida. The following paragraphs are an overview of studies regarding speech-language pathology's direct and indirect connections to disaster management.

REVIEW OF LITERATURE

There is a dichotomy present in the literature. On one hand, there is an indication that healthcare workers are not always willing to participate in disaster management, while others indicated a surprising amount of willingness to provide aid in times of disaster.[9,10] It is unclear what causes this inconsistency. Many therapists evacuate and relocate from the site of a disaster, which can cause unequal interruption to patient care for those who require assistance with communication activities.[11] As members of disaster teams, speech language pathologists have demonstrated the potential to be an asset by educating first responders on the communication needs of individuals with speech-language, feeding and swallowing, and cognitive challenges.[12] While many healthcare workers have well-established roles on disaster management teams, disaster management has been identified as an emerging practice area for speech-language pathology.[12] Addressing communication needs has been recorded as a prioritized function of disaster management in the past.[13] This area of need has not always been adequately addressed despite the well-intentioned efforts of medical care teams.[14] The inclusion of speech language pathologists in this area can greatly benefit both the healthcare provider teams and the outcomes for the individuals impacted by disaster.[6,12]

The literature search produced two articles that indicated a direct connection between speech-language pathology and disaster management. In disaster settings, individuals with disabilities struggle to find accessible arrangements to meet their basic needs, seek shelter, or evacuate.[15] Individuals with disabilities were identified as being disproportionately affected during crisis situations as disruption to their environment and to support systems has a greater impact than for those without disabilities. Individuals with

disabilities, specifically refugees, are often neglected or abandoned during both evacuation and resettlement phases. Individuals with communication disorders, whom speech language pathologists could assist, are also neglected since augmentative and alternative communication needs are a low priority.[15] Disaster preparation strategies need to intentionally include consideration for those with disabilities, so pertinent precautions can be set into place in case of an emergency. The United Nations Convention on the Rights of Persons with Disabilities indicates that all communication modalities for the process of disaster management need to be accessible to all people and that these communication modality accommodations be in place prior to a disaster situation.[16] Communication, evacuation, psychosocial support, healthcare and social services, and education are identified as the key areas that need to be addressed in order to support individuals with disabilities in disaster preparedness.[15] These supports can be addressed, in part, by the speech-language pathology profession.

At the beginning of this section the dichotomy of involvement versus non-involvement was presented as it relates to studies of healthcare workers in general. Evidence and reflection illustrating the desire to be involved and contribute are seen in the following articles. The terrorist attacks in New York and Washington, D.C. on September 11, 2001 and Hurricane Katrina in 2005, amongst several other significant disaster events, demonstrated a need for genuine multidisciplinary collaboration of members in the healthcare community who could aid in disaster relief.[17] With consideration for the competing agendas of personnel who seek involvement, a pilot interdisciplinary training program was put into place in 2007 with the aim to mitigate, overlap, and promote increased effectiveness and productivity among different types of responders.[17] Along with other professionals, public health and other clinical and hospital personnel were recommended as eligible trainees for the program. Among the challenges faced, determining scheduling for working professionals, deciding prerequisites on who could attend training, and brainstorming how to maximize attendance were among the primary concerns. The regional workforce participating was eager to learn and improve their preparedness knowledge and skills. The positive response from the development of the training program warrants further investigation of how collaborative effort, including allied health practitioners amongst other professionals, can break down interagency barriers to improve preparedness training.[17]

Specific to the speech-language pathology profession's contribution to the disaster preparedness of individuals with disabilities, a guide was published for serving people with aphasia when a disaster occurs. The Aphasia Center of California found that speech-language pathology members of a conversation group were largely unaware of what steps to take in a natural disaster, despite living in an area that is prone to earthquakes and wildfires. They created an emergency kit checklist that included visual aids as well as text, so it was accessible to people with aphasia and reading challenges. This accessible checklist was based on a checklist created by the U.S. Federal Emergency Management Agency (FEMA).[18] The team in charge of producing the emergency kits consisted of four speech language pathologists and 31 Aphasia Center members. The content and layout of the emergency kit checklists were repeatedly reviewed and modified. After nine months, the team produced two versions of the checklist with different formats, but identical content. These checklists are available through the Aphasia Center of California website (http://www.aphasiacenter.net/learn-about-aphasia/aphasia-friendly-emergency-kit-information/).

A speech-language pathologist traveled to Haiti on a service mission to assist local families and build homes. Reflecting on her disaster response efforts she summed up the experience with a Haitian proverb that inspired her, "A hungry stomach has no ears".[19] After observing the conditions and reflecting on clinical experiences, the author shared that the whole person must be considered while also focusing on functional communication skills. "Effective communication skills are available… once basic needs are met."[19] Improving communication skills can lead to general well-being and quality of life. Speech language pathologists can use their expertise to implement strategies before, during, and after disaster so effective communication is maintained.

Overall, in the literature, there is limited evidence of speech-language pathology practitioners' involvement and role on disaster management teams. However, effective communication is identified as a requirement for individuals to successfully accomplish tasks and achieve independence, particularly vital for those experiencing a disaster. With the recent consideration of the Disaster Relief Medicare and READI Act, more research into the role of all allied health practitioners' involvement within the disaster management stage is necessary to advise practice guidelines and provide a more informative scope of practice in these settings.[7,8]

THEORETICAL FOUNDATION

The theoretical concepts and constructs in this study are based on the Disaster and Development Occupational Perspective (DDOP). The DDOP framework, principles, and guidelines support wholistic practice in disaster management. The model used to frame this research study is the model of Occupational Stewardship and Collaborative Engagement (mOSCE) which is based on the DDOP framework and focused on the cultivation of resilience, health, and wellbeing through occupation.[20] This model encourages a wholistic approach to address the needs of individuals in preparation for, response to, recovery from, and development after disasters of all kinds. As a vital member of the healthcare team, speech-language pathologists need to be involved in disaster management.

RESEARCH PROBLEM AND PURPOSE

The research problem for this study on speech language pathologists' roles in disaster management revolved around the lack of identified engagement and documentation of the role of speech language pathologists on disaster management teams. The first objective of the study was to identify familiarity, experience, and training related to disaster management in speech language pathologists actively licensed in the state of Florida, through exploration of their self-reported knowledge, skills, and perceptions. An additional objective was to discern speech language pathologists' perceptions of their own roles, as well as other healthcare worker roles in the disaster management stages. To address the objectives of the study, the following research questions were identified:

1. What are speech language pathologists' levels of familiarity, previous professional experience, and training with the stages of disaster response?
2. What is the likelihood of speech language pathologists responding in disaster situations?
3. Do speech language pathologists identify roles for speech language pathology professionals during disaster management stages?
4. Do speech language pathologists identify roles for allied healthcare professionals during disaster management stages?

METHODS

The study employed a cross-sectional survey yielding quantitative data. The Healthcare Practitioner Disaster Management Questionnaire was developed to survey healthcare workers licensed and actively practicing their profession. To determine face validity, three faculty members (occupational therapy, physical therapy, and nursing) of Nova Southeastern University reviewed the questionnaire and provided input for suggested changes. Participants in this study were licensed speech language pathologists actively practicing in Florida. Contact information for participants was obtained through the Florida Department of Health, which oversees the licensing of healthcare professionals in Florida and provides a public information portal where the public may download health professionals' contact information (https://mqa-internet.doh.state.fl.us/downloadnet/Licensure.aspx).

Data were collected through convenience sampling as approved by the Nova Southeastern University Institutional Review Board requirements for email recruitment (IRB #2020-161). A statement that participation in the study indicated informed consent was included in the survey instructions as no identifying information was collected. The survey was designed to gather data on the self-reported awareness, knowledge, skills, participation, training, and perceptions of speech language pathologists, licensed in Florida, regarding the disaster management stage, in order to see their potential role within a team approach to disaster management. Exclusion criteria included speech language pathologists not on the Florida Department of Health list, no registered email address, expired Florida license, retired, and not practicing in the State of Florida. The survey was a one-time event and required approximately 10 minutes to complete. A short description of the study, recruitment information and link to the online questionnaire were deployed using the Research Electronic Data Capture (REDCap) survey tool hosted at Nova Southeastern University.[21,22] REDCap is a secure, web-based software platform designed to support data capture for research studies, providing 1) an intuitive interface for validated data capture; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for data integration and interoperability with external sources.

RESULTS

From the Florida Department of Health webpage, 11,075 speech language pathologist's emails were downloaded. Of the 11,075 emails entered into REDCap, there were 294 emails returned that were not viable as they were either undeliverable email addresses, automatic responses that indicated prolonged time off extending past the survey closure, or respondents who indicated they were no longer practicing or not practicing in Florida. Therefore, the final total of clinicians with viable emails who were offered the survey was 10,781. Since this survey was deployed during the COVID-19 pandemic, when many practices were closed and many practitioners experienced disrupted employment, it is unknown how many of the surveys were delivered to non-viable email addresses that were not closed and not sending automated responses. There were initially 224 respondents to the survey and after elimination of participants who did not meet inclusion criteria, 216 total viable survey responses remained. Data were downloaded from REDCap and analyzed for accuracy using *Microsoft Excel*, Version 2109.[21,22] Data were then uploaded into the IBM Statistical Package for Social Sciences (SPSS) Version 26.0, which was used to analyze the rendered data.[23]

Descriptive statistics were used to examine the personal demographics of the speech language pathologists who completed the survey (See Table 1). Participants' ages ranged from 26 to 70+ years old, with the bulk of therapists in the age groups of 40-49 years, 50-59 years, and 60-69 years. Most respondents were female with a small percentage of male participants. Nearly all respondents identified as not Hispanic or Latino and were primarily of white ethnicity. Most of the respondents reported having personal experiences with a disaster, with natural disasters being the most prevalent. In Florida, considering the frequency of

tropical storms and hurricanes, this is not an unexpected finding. Overall, this analysis presents a participant group of speech language pathologists in Florida who were primarily white, 40–69-year-old females who had experienced some form of disaster.

Table 1. Participant Personal Demographics

	Frequency (%)
Age group (n = 211)	
20-29	11 (5.1)
30-39	28 (13.0)
40-49	59 (27.3)
50-59	50 (23.1)
60-69	50 (23.1)
70+	13 (6.1)
Sex (n=214)	
Female	205 (94.9)
Male	4 (1.9)
Prefer not to say	5 (2.3)
Race (n=214)	
Hispanic or Latino	34 (15.7)
Not Hispanic or Latino	167 (77.3)
Prefer not to answer	13 (6.0)
Ethnicity (n=215)	
African American	8 (3.7)
Black	5 (2.3)
White	180 (83.3)
Prefer not to answer	22 (10.2)
Personal Disaster Experience (n=214)	
Man-made Disaster	1 (0.5)
Natural Disaster	103 (47.7)
Bioterrorism or Pandemic	73 (33.8)
None	37 (17.1)

To further understand the population surveyed, descriptive statistics were used to examine the professional demographics of the speech language pathologists who completed the survey (See Table 2). Most participants had between 11-30 years of practice experience and reported working in a variety of settings, with the majority practicing in education, long term or skilled nursing home facilities, or in a clinic.

Table 2. Participant Professional Demographics

	Frequency (%)
Years of Practice (n=214)	
1-10	42 (19.6)
11-20	54 (25.2)
21-30	60 (27.9)
31-40	38 (17.7)
41-50	20 (9.3)
Primary Practice Setting (n=216)	
Assisted/Independent Living Facility	10 (4.6)
Clinic	38 (17.6)
Education	62 (28.7)
Home Health Care	27 (12.5)
Hospital: Acute Care/General	25 (11.6)
Hospital: Government	4 (1.9)
Hospital: Specialty	6 (2.8)
Medical/Physician's Office	8 (3.7)
Mental Health Clinic: Community/Outpatient	3 (1.4)
Nursing Home/LTC/Extended/Skilled Care Facility	45 (20.8)
Rehabilitation Center	32 (14.8)
University/College Medical Center	9 (4.2)

To address the research question on levels of familiarity, previous professional experience, and training in disaster management, speech language pathologists' level of familiarity with disaster management stages were examined. The survey questions related to familiarity were rated on a sliding scale from 0 (low familiarity) to100 (high familiarity). Therefore, to analyze speech language pathologists' familiarity with disaster management stages a visual analog scale was used. While overall respondents had a lack of familiarity with the disaster management stages, they indicated more familiarity with disaster preparedness (M = 35.23, SD = 27.99) and emergency response (M = 33.6, SD = 27.45) and less familiarity with recovery (M = 31.01, SD = 26.65) and development (M = 25.41, SD = 24.4). The survey questions regarding professional experience and training were multiple response questions and analyzed descriptively. With respect to professional experiences, respondents overwhelmingly indicated no previous involvement (71.9%) in disaster management stages, followed by minimal involvement in the following stages: recovery (12.5%), emergency response (10.7%), disaster preparedness (9.8%), and development (1.8%). Similarly, respondents indicated having limited disaster response training experiences with 70% of respondents indicating no training 25% indicating, one source of training, 4% indicating two sources of training, and 0.9% indicating three sources of training.

With the above profile of speech-language pathologist survey respondents demonstrating a lack of familiarity with disaster management stages, lack of experience professionally with disaster stages, and limited training, the importance of discerning the likelihood of speech language pathologists responding in disaster situations, was emphasized and their likelihood of response was analyzed. The survey questions related to likelihood were rated on a sliding scale that registered numbers from 0 (low familiarity) to100 (high familiarity); therefore, a visual analog scale was used for analysis. Speech language pathologists indicated their likelihood of responding to disasters in the following geographical areas in decreasing order, local community disasters (M = 36.85, SD = 31.57), pandemic or bio-terrorism event (M = 33.27, SD = 32.54), and outside of their local community (M = 20.94, SD = 24.77). The overall picture of speech language pathologists responding to the survey indicated a lack of knowledge, experience, and training in disaster management stages.

Proceeding, speech language pathologists' perceptions of healthcare professionals' roles in disaster management stages were analyzed. When asked whether they felt they as a professional, and others in their profession had a role in disaster management 66% (*n*=143) indicated they felt speech language pathologists have a role while 34% (*n*=73) indicated that speech language pathologists do not have a role. Looking more broadly at other healthcare professions, speech language pathologists were asked whether they believed that other healthcare professionals had unique skills that could contribute to disaster response and management (See Table 3). A larger percentage of speech language pathologists identified physician's assistant and nursing professions as having roles in disaster management than speech language pathology, physical or occupational therapy professionals. Therapy professionals identified as trained at the assistant level had the lowest percentages.

Table 3. Speech Language Pathologists' Perception of Healthcare Professions' Unique Skills

	Unique skills to contribute % (*n*)	**No unique skills to contribute % (*n*)**
Physician's assistant	77 (167)	23 (49)
Registered nurse	81 (176)	19 (40)
Licensed practical nurse	81 (174)	19 (42)
Speech-language pathologist	66 (143)	34 (73)
Speech-language pathology assistant	32 (69)	68 (147)
Physical therapist	52 (112)	48 (104)
Physical therapist assistant	40 (87)	60 (129)
Occupational therapist	51 (109)	50 (107)
Occupational therapy assistant	38 (83)	62 (133)

To identify the stage(s) of disaster management that speech-language pathologists perceived the specified healthcare professionals with unique skills could be involved with descriptive statistics were utilized. Emergency response and recovery were identified most frequently as stages healthcare professionals could be involved with followed by preparedness and development (See Table 4). The results of this study will be considered further in the discussion section.

Table 4. Speech Language Pathologists' Perception of Healthcare Professions' Participation in Disaster Management Stages

	Involved % (*n*)	**Not involved in % (*n*)**
Disaster preparedness	64 (139)	36 (77)
Disaster emergency response	72 (155)	28 (61)
Disaster recovery	75 (161)	26 (55)
Disaster development	55 (118)	45 (98)

Limitations

The researchers sought to describe and analyze the research questions at hand, while acknowledging the following limitations to the study. The available literature on speech language pathologist involvement and perceptions of engagement and participation in disasters is limited. The overarching theoretical base for the research was derived from an occupational therapy perspective and most of the contributors are in the occupational therapy profession, with one speech-language pathology professional (grateful appreciation for his contributions!). Additionally, the response rate to the survey was low. Therefore, the breadth of the speech-language pathology profession and its contribution to disaster management and response may not have been fully captured. Another limiting factor of the study is the lack of national representation, as only speech language pathologists licensed in the state of Florida were surveyed. Finally, this survey was deployed during the global COVID-19 pandemic that began in 2020. This environmental factor may have impacted the participants' likelihood of participating in disaster management roles. Additionally, it may have influenced the participants' answers to the survey questions compared to their attitudes prior to the pandemic.

DISCUSSION

This study was designed to explore the potential for speech language pathologists, licensed in Florida, engagement in disaster management by identifying awareness, involvement, and training related to disaster management. A survey was conducted regarding their self-reported knowledge, skills, perceptions, and likelihood of participating in disaster stages. Although there was reportedly limited training and guidance available and minimal professional experience with disaster, speech language pathologists who reported having professional experience with disaster stages, and having training, indicated an increased likelihood of participating in future disaster management. Additionally, the analysis identified that speech language pathologists recognize they play a role on the disaster management team along with other healthcare professionals. These results indicate the existence of a general lack of training and professional experience with interactions of the health care response team, which may be an influential factor affecting speech language pathologists' likelihood of participating in disaster response. Speech language pathologists' unique understanding of feeding, eating, swallowing, and communication disorders make them invaluable to collaborate with other professionals to meet clients' basic needs following a disaster. Increased efforts need to be made to expand opportunities for interprofessional collaboration surrounding disaster management and to create avenues to educate speech language pathologists on these opportunities (i.e., the Medical Reserve Corps, Red Cross, mission trips, etc.). Speech language pathologists have opportunities to become involved in interdisciplinary teams by collaborating with other medical professionals in training and organizations. ASHA has shown direct involvement in disaster management through an expressed interest in joining an interdisciplinary coalition of allied healthcare professionals. This coalition was created following Hurricane Katrina in 2005, with the objective of fostering better interdisciplinary communication by working with major relief organizations to identify areas of need in relation to disaster relief and recovery.[24]

This study found a positive correlation between disaster management training and increased likelihood of participation in future disaster response, supporting the importance of training healthcare professionals in disaster management. Lack of training was also a theme found in the literature. Speech language pathologists working in the U.S. school system reported a lack of confidence in the continuous provision of adequate service delivery during the COVID-19 global health emergency, citing a lack of guidance and training as the main issues.[25] In Massachusetts hospitals, lack of proper training to equip health professionals with the tools required to become involved in disaster management was one of the barriers that affected the participation of interdisciplinary healthcare workers.[26] The majority of speech-language pathologists in this study who had training reported receiving it through continuing education. With this information, those working to increase the knowledge base of speech language pathologists and other healthcare professionals in disaster management may want to consider using a continuing education format suitable for various healthcare professions to encourage participation and increase opportunities for interprofessional collaboration. Proposed training methods found in the literature include the implementation of interprofessional management courses and simulated training experiences, which have proven to be effective methods in increasing professionals' self-reported skill, confidence, and knowledge related to disaster response.[27,28] Similar to interdisciplinary teams found in clinical practice, speech language pathologists, occupational therapists, physical therapists, and all other members of the healthcare team need training and education about their roles to form teams to holistically address the needs of clients in all disaster management stages. Understanding how to navigate disaster before it occurs can help mitigate the trauma following a devastating event. With proper disaster management training and communication among allied healthcare workers decreased negative mental health repercussions developed following disasters.[29]

As the researchers discussed the study and the idea of speech language pathologists' and other healthcare professionals' participation in disaster management, it was recognized that the choice of terminology, the types of teams they inferred, and the roles healthcare workers would have in each were quite different. The three types of teams researched included interdisciplinary, multidisciplinary, and transdisciplinary.[24] A multidisciplinary team includes professionals from different disciplines working together, each deriving knowledge from their own profession and staying within the treatment parameters of their discipline. Each discipline adds their skills and expertise to the team. An interdisciplinary team integrates knowledge and methods from the different disciplines, using a synthesis of approaches to create unity. Members of all disciplines are interactive members of the team. Transdisciplinary teams integrate the disciplines and go beyond the boundaries of the disciplines. Team members are holistic in their approach.[30] It is beyond the scope of this article to discuss how each of these types of teams could be employed in disaster management. However, each has its strengths and weaknesses and applicability to different disaster management stages.

There is a need for public health, law enforcement, and responder disciplines to work together in well-coordinated efforts to prepare and respond to bioterrorism and other threats/emergencies in unique team roles during emergency response.[27] Speech language pathologists in this study identified that they, and other healthcare professionals, have unique skills that would contribute to a team response to disaster and other disaster management stages. As members of the disaster management team, a multiple discipline team approach (interdisciplinary, multidisciplinary, or transdisciplinary) best aligns with speech language pathologists and other healthcare professionals' practice values by working together to provide client-centered and informed care.

Future Research & Clinical Considerations

With 66.2% of the respondents indicating that speech language pathologists do have a perceived role in disaster management, future research should be conducted to see what speech language pathologists believe disaster response training programs should include to improve professional likelihood of responding to future disasters. Research is also needed with speech language pathologists as well as other healthcare professionals to identify the type of team (interdisciplinary, multidisciplinary, or transdisciplinary) that is most effective in each of the stages of disaster management, including disaster preparedness, emergency response, recovery, and development. Furthermore, future research to understand what professionals need to feel comfortable within the role is also warranted in order to best promote the application of professional skills during disaster events. The results of this study have the potential to impact the field of speech-language pathology, as future educational opportunities and expanded practice guidelines may be amended to further emphasize the role of speech language pathologists within teams providing aid throughout all stages of the disaster stage.

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