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Current Education Offerings on Occupational Therapy: Addressing Feeding, Eating, and Swallowing Across the Lifespan

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Current Education Offerings on Occupational Therapy: Addressing Feeding, Eating, and Swallowing Across the Lifespan

Abstract

Occupational therapists play a vital role in the care of individuals with feeding, eating, and swallowing (FES) disorders across the lifespan. Although there are certain standards created by the Accreditation Council of Occupational Therapy (ACOTE) for understanding of assessment and management practices specific to FES, there are inconsistencies in how occupational therapy programs in the United States address FES disorders within their curriculum. This cross-sectional exploratory survey study received responses from 54 Master of Occupational Therapy (MSOT) programs and 63 entry-level Occupational Therapy Doctoral (OTD) programs. Survey questions included quantitative and qualitative information on general information regarding FES content taught within the program. Survey results indicated only 4.8% of programs had a course dedicated to FES disorders and an average of 6.37 hours were dedicated to FES across the lifespan. Chi-squared tests for independence demonstrated a significant difference between pediatric educational hours over adult occupational therapy educational hours in FES (p<0.001). There was no significant difference however between the number of hours dedicated to FES between MSOT and OTD programs (p=0.146). The results question the adequacy of educational hours dedicated to FES management across the lifespan. In order for occupational therapy practitioners to bring their inherent value in contributing holistically to assessment and management of FES disorders, therapists must have knowledge and confidence in their skills. Ensuring that entry-level occupational therapists are adequately prepared to evaluate and treat individuals with FES disorders is imperative for the profession to remain liable and competent in the field of FES. While occupational therapy education programs are meeting the ACOTE dysphagia standard, the guestion remains if the number of hours programs are dedicating is enough to ensure entry level competency, as well as enough to compete with speech and language pathologists.

Keywords

Feeding, eating and swallowing disorders; occupational therapy education; occupational therapy

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Current Education Offerings in Occupational Therapy Programs: Addressing Feeding, Eating, and Swallowing Across the Lifespan

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ABSTRACT

Occupational therapists play a vital role in the care of individuals with feeding, eating, and swallowing (FES) disorders across the lifespan. Although there are certain standards created by the Accreditation Council of Occupational Therapy (ACOTE) for understanding of assessment and management practices specific to FES, there are inconsistencies in how occupational therapy programs in the United States address FES disorders within their curriculum. This cross-sectional exploratory survey study received responses from 54 Master of Occupational Therapy (MSOT) programs and 63 entry-level Occupational Therapy Doctoral (OTD) programs. Survey guestions included guantitative and gualitative information on general information regarding FES content taught within the program. Survey results indicated only 4.8% of programs had a course dedicated to FES disorders and an average of 6.37 hours were dedicated to FES across the lifespan. Chi-squared tests for independence demonstrated a significant difference between pediatric educational hours over adult occupational therapy educational hours in FES (p<0.001). There was no significant difference however between the number of hours dedicated to FES between MSOT and OTD programs (p= 0.146). The results question the adequacy of educational hours dedicated to FES management across the lifespan. In order for occupational therapy practitioners to bring their inherent value in contributing holistically to assessment and management of FES disorders, therapists must have knowledge and confidence in their skills. Ensuring that entry-level occupational therapists are adequately prepared to evaluate and treat individuals with FES disorders is imperative for the profession to remain liable and competent in the field of FES. While occupational therapy education programs are meeting the ACOTE dysphagia standard, the guestion remains if the number of hours programs are dedicating is enough to ensure entry level competency, as well as enough to compete with speech and language pathologists.

Introduction

Occupational therapists have an important role in care with individuals with feeding, eating, and swallowing (FES) disorders throughout the lifespan. Currently there are increasing numbers of children who are affected by pediatric feeding disorder (PFD) (Kovacic et al., 2021) and increased prevalence of adults with dysphagia (Aslam & Vaezi, 2013; Suiter & Gosa, 2019). Difficulty with FES can lead to decreased quality of life and lack of independence in both pediatric and adult populations. As occupational therapists assist in building independence and focus on activities of daily living, they are vital to the care required for individuals with FES disorders. The Accreditation Council for Occupational Therapy (ACOTE) places standards for all occupational therapy educational programs to address FES in their curriculum to teach students to evaluate and provide interventions for dysphagia and disorders of feeding and eating, however, there is little knowledge on how FES education is being addressed in programs or how the standard is met.

Literature Review

Role of Occupational Therapists in Feeding, Eating, and Swallowing

As eating and feeding are basic activities of daily living, and therein necessary occupations for survival, occupational therapists provide an essential role in care and management of FES disorders (American Occupational Therapy Association [AOTA], 2017; Boop & Smith, 2017). Under the Occupational Therapy Practice Framework, FES are categorized as activities of daily living, inherently falling under the scope of occupational therapy practitioners (AOTA, 2020). Occupational therapists provide rehabilitative, habilitative, and palliative care in various settings across the lifespan, including hospitals, rehabilitation centers, outpatient clinics, long-term-care facilities, schools, home settings, and in the community. Treatment for FES can include a wide array of environmental modifications, positioning, use of adaptive equipment, feeding and swallowing strategies, remediation techniques, mental health considerations, and client and caregiver education (AOTA, 2017; Boop & Smith, 2017). Interventions can range from addressing problems related to physically bringing food to the mouth, the oral motor skills required to manage the bolus, impairments of pharyngeal swallow, the psychosocial components of FES and dysfunction related to cognitive impairments (Boop & Smith, 2017). Examples include assisting both infants and parents with the transition from breastfeeding or bottle feeding to solid foods and thin liquids. transitioning individuals with enteral feeding to integrate tube feedings into their daily lives and social interactions, and providing interventions for older adult clients who may face challenges consuming solid foods and thin liquids safely due to a range of conditions related to aging, dementia, or other medical issues (Boop & Smith, 2017). With advanced training, occupational therapists can complete bedside swallow evaluations and use instrumentation, such as video fluoroscopic swallow studies (VFSS) or fiberoptic endoscopic evaluation of swallowing (FEES), to further assess all phases of the swallow. Occupational therapists may recommend modifications to the diet or suggest alternative methods for feeding and eating in addition to all the previously mentioned care plans. Overall, involving occupational therapists in care teams for individuals with FES disorders can improve overall wellbeing and quality of life for these individuals (Paul & D'Amico, 2013).

Prevalence of Feeding, Eating, and Swallowing Disorders

In 2019 pediatric feeding disorder (PFD) was defined as "impaired oral intake that is not age-appropriate and is associated with medical, nutritional, feeding skill, and/or psychological dysfunction" (Goday et al., 2019). Based on a recent nationwide prevalence study, PFD was found to occur in as many as one in 23 children under the age of five. This is more prevalent than other well-known childhood conditions such as autism spectrum disorder or cerebral palsy (Kovacic et al., 2021). Concurrently, there have been more than half a million children diagnosed with pediatric FES disorder in the United States (Bhattacharyya, 2015) with 80% of children diagnosed with a developmental delay also having a FES disorder (Lefton-Greif & Arvedson, 2016). Pediatric feeding disorders can be caused by impaired structure of the gastrointestinal, cardiorespiratory, and neurologic systems. Is it also notable that children with higher medical complexity such as neurodevelopmental disorders and neurological impairments are of greater risk for PFD (Goday et al., 2019; Kovacic et al., 2021). These complex medical conditions include infants born with cerebral palsy, Down syndrome, cleft lip/palate and other craniofacial anomalies, cancer, congenital heart defect, and drug exposure. Pediatric feeding disorders can lead to long term neurological, motor, and health impairments as well as limit access to education, social participation, overall development, and most importantly lead to significant safety risks due to malnutrition when left untreated. Due to the complex nature of PFD and the current lack of an assessment tool that covers all areas of PFD, entry level occupational therapists need to be familiar with several valid and reliable assessment tools to properly evaluate and treat individuals with PFD (Rabaey et al., 2023).

Similarly, dysphagia is a FES disorder symptom that can affect the pediatric and adult population. Dysphagia can broadly be defined as having difficulty with swallowing. Dysphagia is prevalent in approximately 8% of the world's population (Cichero et al., 2017) and affects about one in 25 adults in the United States (Bhattacharyya, 2014). Dysphagia can cause serious physical problems, such as malnutrition, dehydration, aspiration pneumonia, asphyxiation, psychological problems, and even death (Harvey et al., 2022), as well as psychological problems for both the patient and caregiver (Koster et al., 2023). Persons with dysphagia can experience a reduced quality of life, through experiencing disinterest, embarrassment, reduced enjoyment, and isolation within the occupation of eating and drinking. Caregivers also have been reported to experience feelings of isolation, increased anxiety, depression and disruption in their social life (Koster et al., 2023).

Within the adult population, approximately 15% to 22% percent of community dwelling individuals over the age of 50 are affected by dysphagia (Alsam & Vaezi, 2013) and 60% of individuals in assisted living facilities and nursing homes report having feeding difficulties (Suiter & Gosa, 2019). In end of life care, dysphagia prevalence was found to be 30% in palliative care and 32% in the hospice setting (Kenny et al., 2019). Dysphagia is commonly associated with aspiration pneumonia (48%) and stroke (14%) (Bosch et al., 2023) and is often correlated with malnutrition, mortality, and age (Banda et al., 2021), especially for individuals over the age of 80 (Bosch et al., 2023). A recent meta-analysis estimates the prevalence of dysphagia in adults over 60 at 46% (Banda

et al., 2021). The United Nations (2019) estimated that globally by 2050, one in six people will be aged 65 years or older. As the population continues to age, the prevalence of dysphagia will likely also continue to rise.

Educational Standards for Occupational Therapy

Although occupational therapists are required to receive a certain standard of education regarding FES disorders in academic programs, it is unknown to what extent and how it is being disseminated. Current ACOTE standards require that occupational therapy programs teach students to evaluate and provide interventions for dysphagia and disorders of feeding and eating to enable performance, and train others in precautions and techniques while considering client and contextual factors (ACOTE, 2018). Education of occupational therapists includes an academic curriculum that includes biological and physical sciences related to the function and structure of FES, as well as the behavioral and social sciences (ACOTE, 2018). This baseline knowledge allows occupational therapists to have the skills to develop effective and individualized evaluations and interventions concerning FES disorders across the lifespan. Occupational therapists hold a unique position in care of FES as they treat from a holistic perspective that not only recognizes the physiological factor of FES disorders but also the psychosocial, cultural, and contextual factors that are involved (Boop & Smith, 2017). How academic programs are covering the standards and preparing entry level occupational therapy practitioners to competently evaluate and treat FES has yet to be researched.

Within the field of speech and language pathology (SLP), the amount of FES education in academic programs has been recently studied. In the United States approximately 80% of SLP programs offer a course on FES across the lifespan (Knollhoff, 2023). Yet despite the education provided, only 8.9% of SLPs felt they were adequately prepared by their academic program to treat pediatric dysphagia and 97.7% of therapists recommended increased education in pediatric dysphagia (Wilson et al., 2020). Similar results were found by Zimmerman (2016), in that most SLP students (70.8%) did not take a separate course in pediatric dysphagia, but those that did felt more clinically prepared. There is not a similar study within the field of occupational therapy looking at the number of hours dedicated to FES or programs that offer separate courses in FES.

This study aims to evaluate the extent to which FES education across the lifespan is being taught in the United States occupational therapy programs. The goal is to understand the variability in education, including hours dedicated to both pediatric and adult, pedagogy, and content.

Methods

The study was approved through the second author's institutional review board. This study utilized a cross-sectional, exploratory survey design to explore the extent of FES education in occupational therapy programs in the United States. The survey was created by the second, third and fourth authors, who were members of AOTA' s Mealtime Occupations Feeding, Eating and Swallowing Community of Practice. The three authors had varying backgrounds in FES, which cover the lifespan. The survey was formulated after reviewing the notes from the Community of Practice's discussion and "Conversations that Matter" presentation at the AOTA 2023 annual conference in Kansas City. The demographic information requested in the survey included geographical region in the United States, level of education of program, and participant's role in the program. Examples of survey questions included: "How many dedicated hours do you allocate to educating students on FES?", "How are you meeting the ACOTE standard B4.16 Dysphagia and Feeding Disorders?" and "Please check all of the below areas students are competent in as a result of the education they received in FES." The survey was divided into a pediatric and an adult section to gather the information separately (see Appendix A).

Participants

All occupational therapy programs in the United States were invited to participate in the survey – 179 master of occupational therapy programs (MSOT) and 158 entry level occupational therapy doctoral programs (OTD). All programs had accredited, candidacy, or preaccreditation status from ACOTE.

Procedure

Following ethics approval, occupational therapy programs were contacted through their email addresses posted on the ACOTE school directory. Dissemination of emails occurred once a week for four consecutive weeks total. In the first week, surveys were sent out to general emails (i.e., admission email or program email) listed on the ACOTE school directory. During the following three consecutive weeks, emails were sent directly to program directors or chair of each program. The study was also posted on AOTA's CommOT forum. Posting on CommunOT (FES CoP, General CommunOT, and Academia CommOT) occurred starting the second week of email distribution. The survey link was posted once a week for three consecutive weeks.

Programs were invited to participate through Qualtrics. The survey included 15 questions regarding the number of hours taught in FES in pediatric and adult courses, how the ACOTE standards were met for each program, and what tools/resources faculty used to meet the ACOTE standard. The survey took approximately 5 minutes to complete and consisted of both qualitative and quantitative data. Questions were formatted in either multiple choice and/or free response format to allow for most accurate responses. Survey results were anonymous. Participants were provided with consent forms prior to completing the survey and could leave the survey at any time.

Data Analysis

Qualtrics data was imported directly into Microsoft Excel. The survey responses were computed, and the data was analyzed with the Statistical Package for Social Science (SPSS- Version 29.0). Total number of responses were obtained for each question and numerically coded for all qualitative responses. Descriptive statistics were utilized for program information and general information regarding feeding, eating, and swallowing content taught within the program. A chi-square test for independence was conducted to examine the difference between MSOT programs and OTD programs as well as the

difference between adult and pediatric education. These associations were examined using Pearson correlation coefficient. A p value of 0.05 was considered statistically significant for all analyses.

Results

Demographics

Of the 179 MSOT programs and 158 OTD programs, 54 (43.5%) MSOT and 63 (50.8%) OTD programs participated (see Table 1). When broken down by region, there was no statistical difference between program and distribution between geographical regions (p= 0.151). The individuals completing the survey consisted of 73 (63.4%) full time faculty and 38 (32.5%) directors.

Table 1

Program L	Level and Region		
		n (%)	p-value*
Programs			
	MSOT	54 (43.4)	0.146
	OTD	63(50.8)	
	Total	117 (94.4)	
Regions			
	Northeast	36 (29.0)	0.151
	South	37(29.8)	
	Mid-West	30 (24.2)	
	West	19 (15.3)	
	Total	122 (98.4)	

*Pearson Chi-square test

Course Hours

Results indicated that an average of 7.24 hours of pediatric FES education and an average of 5.5 hours of adult FES education (average total 6.37) were taught across all occupational therapy programs. Overall, 58.9% of schools reported that occupational therapy full-time faculty taught FES education. Others teaching FES education for pediatrics included occupational therapy guest lecture (12.03%), occupational therapy adjunct faculty (11.28%), program directors (9.02%), and SLP guest lecture (4.51%). Other teaching FES education for adults included OT adjunct faculty (10.89%), SLP guest lecture (8.91%), occupational therapy guest lecture (4.96%), program director (4.95%), and SLP adjunct faculty (1.98%). There was no significance between MSOT programs and OTD programs regarding hours of education taught (p=0.146), however there was a significant difference between pediatric and adult education with more hours dedicated to pediatrics across all programs. In addition, only 4.8% of programs indicated they had a dedicated FES course, however there was no significant difference between MSOT and OTD programs in dedicated course offering (see Table 2).

Table 2

Course Hours

		Average Hours	Average Hours Taught by OT Faculty	p-value*
Population				
	Pediatric	7.24	6.37	0.001
	Adult	5.5	4.79	
	Total Average	6.37	5.58	

*Pearson Chi-square test

Instructional Approaches

In regards to meeting ACOTE standards, lecture (23.8 % for pediatric and 21.8% for adults) and labs (22.3% for pediatric and 20.4% for adults) were the most identified in pediatric and adult populations while multidisciplinary course collaboration and recorded webinars were the least identified in both pediatric and adult populations (see Figure 1).

Survey participants were also asked to rate how competent they felt their students were in various aspects of FES, from screening to evaluation to treatment. Although subjective data, the results indicated that faculty perceived students to be most competent in pediatrics in the areas of treatment of feeding and screening for posture and coordination. For the adult FES education, participants perceived students had the most competence in screening for oral motor dysfunction (see Figure 2).

In order to have actional steps as a result of this study, the authors also included a question asking, "What resources or tools do you need in order to successfully meet the ACOTE standard B.4.16. Dysphagia and Feeding Disorders" for both pediatrics and adults. Participants were asked to prioritize and rate a list of teaching resources, such as a PowerPoint slide deck, videos, guest lectures, interactive classroom lab ideas, and more. The results indicated that for pediatrics, programs chose videos (n=28, 40%) as highest ranking, interactive lab ideas (n=17, 25.8%) as next highest, and slide deck, observations, and recorded webinar had next highest with 5 responses. For adults, programs chose lab ideas (n=14, 28%) as highest ranking, videos (n=12, 21.8%) as next highest, and clinical observations (n=8, 20%) as next highest (see Figure 3). Please see Appendix B for all responses.

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Figure 1

Components Used to Meet ACOTE Standard



Figure 2

Areas of Student Competencies



Competencies

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Figure 3

Ranking of Resources/ Tools to Successfully Meet ACOTE Standards



Note. Pediatrics (P), Adults (A)

Discussion

The data results show that occupational therapy programs were providing an average of 6.37 hours in total for FES education and only 4.8% of schools indicated they had a dedicated course to FES education. Although occupational therapy faculty instead of other allied health practitioners specialized in FES were predominantly teaching these courses, education could be improved with increased multidisciplinary course collaboration and dedicated courses to FES education.

This study was the first to evaluate FES education in accredited occupational programs in the United States. The authors found that occupational therapy programs dedicated a significantly higher number of hours to pediatric FES education in comparison to adult FES education. This is consistent with the prevalence of pediatric feeding disorders occurring (1 in 23) more than the prevalence of adult FES (1 in 25; Bhattacharyya, 2015; Kovacic et al., 2021). Given the higher prevalence of pediatric FES, it is logical that more education hours are dedicated to aspects regarding pediatric FES disorders. Nevertheless, since FES disorders still significantly impact adult populations, there remains a continued necessity to focus on education surrounding evaluation, intervention, and treatment of adult FES disorders.

Although some occupational therapy programs offered optional courses in FES, these programs represented the minority and indicate a need for further academic support. Compared to one other content area considered a specialty within the occupational therapy curriculum, the education on FES received comparatively fewer average educational hours than the area of sexuality. Currently, approximately 7.27 hours were dedicated to sexuality education in occupational therapy programs (Eglseder et al., 2018). Although this number was not significantly higher than the hours allocated to FES education, students still expressed a lack of competency when it came to discussing sexuality with their future clients (Duran & Valdes, 2021). Both sexuality and FES are currently considered more specialized topics within occupational therapy, yet they hold significant value in the field. Consequently, further research is necessary to explore students' perceived competency concerning FES disorders as entry level OTs.

In regards to perceived student competency within the area of FES across the lifespan, survey participants felt students were least competent in screening for nutritional dysfunction and evaluation of swallowing. As all aspects of FES are considered within the scope of practice for occupational therapists, all domains must be addressed for therapists to reach entry level competency. AOTA's position paper (2017) stated that all entry-level occupational therapists have the knowledge and skills to assess and treat feeding, eating and swallowing, therefore the education students receive must prepare them to treat all areas of FES.

Limitations

There are some limitations to consider when reviewing the findings. The first limitation is the incomplete survey responses, which might have led to missing data and/or potential bias in the analysis. Another limitation was that the researchers did not review the actual syllabi or course content of the programs included in the study. Without the

syllabi, there is a gap in understanding the specific details of how FES content was provided and how ACOTE standards were met. Lastly, the survey's psychometric properties were not studied prior, which may have resulted in response bias affecting the accuracy of the findings. Despite these limitations, the research's strength lies in its inclusion of a significant sample of United States occupational therapy programs, which can still offer valuable insights into FES education.

Implications for Occupational Therapy Education

As the prevalence of pediatric and adult FES increases, it is imperative that occupational therapy programs continue to address and educate students on FES disorders as the profession plays an integral role in the care of these individuals. Currently MSOT programs span about two years to complete and OTD programs span approximately three years, which creates challenging timelines for building competency in all areas within the scope of practice. As programs face numerous barriers to providing FES education across the lifespan, academic institutions are encouraged to consider complete curriculum mapping for course content on FES to ensure content is not just introduced but reinforced and applied. Programs are encouraged to utilize outside resources to help fill knowledge gaps, such as inviting guest speakers from the occupational therapy profession, utilizing tools offered by therapists active in the field (e.g. hospital entry level FES competencies), or Level I fieldwork placements with populations with FES disorders. Additional research is recommended on the pedagogy of FES across the lifespan, the perceived student competency prior to Level II fieldwork and the FES opportunities for learning students receive while on Level I and Level II fieldwork. It would also be beneficial to research the entry level practitioner's perceived level of competency in FES to better assess if the current number of hours dedicated to FES is sufficient for entry level practice.

Conclusion

To remain a viable option for therapeutic evaluation and treatment of FES across the lifespan, occupational therapy programs are highly encouraged to consider adding a course dedicated to FES. As stakeholders are more apt to review program courses than individual syllabi, occupational therapy programs at a glance give the appearance of significantly less education in FES than our speech and language colleagues. As the Occupational Therapy Practice Framework (AOTA, 2020) clearly recognizes FES as a significant occupation within our scope of practice, occupational therapy programs need to take action steps to be recognized as a profession of choice for FES disorders.

References

Accreditation Council for Occupational Therapy Education. (2018). 2018 Accreditation Council for Occupational Therapy Education (ACOTE®) Standards and Interpretive Guide (effective July 31, 2020). *American Journal of Occupational Therapy,* 72(Supplement_2), 7212410005p1-7212410005p83. <u>https://doi.org/10.5014/ajot.2018.72S217</u>

American Occupational Therapy Association. (2020). Occupational therapy practice framework: Domain and process (4th ed.). *American Journal of Occupational Therapy, 74*(Suppl. 2), 7412410010p1-7412410010p87. <u>https://doi.org/10.5014/ajot.2020.74S2001</u>

- American Occupational Therapy Association. (2017). The practice of occupational therapy in feeding, eating, and swallowing. *American Journal of Occupational Therapy*, *71*, 7112410015. <u>https://doi.org/10.5014/ajot.2016.716S04</u>
- Aslam, M., & Vaezi, M. F. (2013). Dysphagia in the elderly. *Gastroenterology & Hepatology, 9*(12), 784-795.
- Banda, K. J., Chu, H., Chen, R., Kang, X. L., Jen, H.J., Liu, D., Shen Hsiao, S.T., & Chou, K.R. (2021). Prevalence of oropharyngeal dysphagia and risk of pneumonia, malnutrition, and mortality in adults aged 60 years and older: A meta-analysis. *Gerontology*, 68(8), 841–853. https://doi-org.ezai.ez.cwmars.org:3243/10.1159/000520326
- Bhattacharyya, N. (2014). The prevalence of dysphagia among adults in the United States. *Otolaryngology-Head and Neck Surgery, 151*(5), 765-769. https://doi.org/10.1177/0194599814549156
- Bhattacharyya, N. (2015). The prevalence of pediatric voice and swallowing problems in the United States. *The Laryngoscope, 125*(3), 746-750. https://doi.org/10.1002/lary.24931
- Boop, C., & Smith, J. (2017). The practice of occupational therapy in feeding, eating, and swallowing. *American Journal of Occupational Therapy*, *71*(S2), 7112410015-7112410015p13. <u>https://doi.org/10.5014/ajot.2017.716S04</u>
- Bosch, G., Comas, M., Domingo, L., Guillen, S. A., Duarte, E., Castells, X., & Sala, M. (2023). Dysphagia in hospitalized patients: Prevalence, related factors and impact on aspiration pneumonia and mortality. *European Journal of Clinical Investigation*, *53*(4), 1–10.

https://doi-org.ezai.ez.cwmars.org:3243/10.1111/eci.13930

- Cichero, J. A. Y., Lam, P., Steele, C. M., Hanson, B., Chen, J., Dantas, R. O., Duivestein, J., Kayashita, J., Lecko, C., Murray, J., Pillay, M., Riquelme, L., & Stanschus, S. (2017). Development of international terminology and definitions for texture-modified foods and thickened fluids used in dysphagia management: The IDDSI framework. *Dysphagia*, *3*2(2), 293–314. https://doi.org/10.1007/s00455-016-9758-y
- Duran, R. R. & Valdes, K. A. (2021). Sexuality within occupational therapy education: Assessing faculty and student perceived competence. *Journal of Occupational Therapy Education, 5*(1). <u>https://doi.org/10.26681/jote.2021.050105</u>
- Eglseder, K., Webb, S., & Rennie, M. (2018). Sexual functioning in occupational therapy education: A survey of programs. *Open Journal of Occupational Therapy, 6*(3). https://doi.org/10.15453/2168-6408.1446
- Goday, P. S., Huh, S. Y., Silverman, A., Lukens, C. T., Dodrill, P., Cohen, S. S., Delaney, A. L., Feuling, M. B., Noel, R. J., Gisel, E., Kenzer, A., Kessler, D. B., Kraus de Camargo, O., Browne, J., & Phalen, J. A. (2019). Pediatric feeding disorder: Consensus definition and conceptual framework. *Journal of Pediatric Gastroenterology and Nutrition, 68*(1), 124-129. https://doi.org/10.1097/MPG.00000000002188
- Harvey, C., Flemming, R., Davis, J., & Reynolds, V. (2022). Facilitators and barriers to implementing the International Dysphagia Diet Standardisation Initiative in care facilities in upstate New York. *Perspectives of the ASHA Special Interest Groups*, 7(1), 156–164.

https://doi-org.ezai.ez.cwmars.org:3243/10.1044/2021_PERSP-20-00159

- Kenny C, Regan J, Balding L, Higgins, S., O'Leary, N., Kelleher, F., McDermott, R., Armstrong, J., Mihai, A., Tieman, E., Westup, J., Thirion, P., & Walsh, D. (2019).
 Dysphagia prevalence and predictors in cancers outside head, neck, and upper gastrointestinal tract. *Journal of Pain and Symptom Management, 58*(6), 949-958. <u>https://doi.org/10.1016/j.jpainsymman.2019.06.030</u>
- Knollhoff, S. M. (2023). Pediatric dysphagia: A look into the training received during graduate Speech-Language Pathology programs to support this population. *Language, Speech & Hearing Services in Schools, 54*(2), 425-435. <u>https://doi.org/10.1044/2022_LSHSS-22-00114</u>
- Koster, E., Wadhwaniya, Z., & Namasivayam-MacDonald, A. M. (2023). Preliminary study of the effects of a dysphagia support group on quality of life. *American Journal of Speech-Language Pathology*, 32(4), 1466–1488. <u>https://doi-org.ezai.ez.cwmars.org:3243/10.1044/2023</u> AJSLP-22-00278
- Kovacic, K., Rein, L. E., Szabo, A., Kommareddy, S., Bhagavatula, P., & Goday, P. S. (2021). Pediatric feeding disorder: A nationwide prevalence study. *Journal of Pediatrics*, 228, 126-131.e3. <u>https://doi.org/10.1016/j.jpeds.2020.07.047</u>
- Lefton-Greif, M. A., & Arvedson, J. C. (2016). Pediatric feeding/swallowing: Yesterday, today, and tomorrow. *Seminars in Speech and Language, 37*(4), 298-309. https://doi.org/10.1055/s-0036-1587702
- Paul, S., & D'Amico, M. (2013). The role of occupational therapy in the management of feeding and swallowing disorders. New Zealand Journal of Occupational Therapy, 60(2), 27-31. <u>http://doi.org/10.3316/informit.856150318920988</u>
- Rabaey, P. A, Barlow, K., Jama, H., & Lehr, V. (2023). Investigation of assessment tools in the area of pediatric feeding evaluation: A mixed-methods study. *American Journal of Occupational Therapy*, 77(4), 7704205110. https://doi.org/10.5014/ajot.2023.050040
- Suiter, D. M., & Gosa, M. M. (2019). Assessing and treating dysphagia. Thieme. https://doi.org/10.1055/b-006-149650
- United Nations, Department of Economic and Social Affairs, Population Division. (2019). *World population ageing 2019: Highlights* (ST/ESA/SER. A/430). <u>https://www.un.org/en/development/desa/population/publications/pdf/ageing/Worl</u> <u>dPopulationAgeing2019-Highlights.pdf</u>
- Wilson, J. J., Simmons, A. K., & McCarthy, J. (2020). Pediatric dysphagia: Survey results describing Speech-Language Pathologists' education and experience. *Perspectives of the ASHA Special Interest Groups, 5*(1), 236-245. <u>https://10.1044/2019_PERSP-19-00016</u>
- Zimmerman, E. (2016). Pediatric dysphagia: A rise in preterm infants and a need for more formal training for Speech-Language Pathologists. *International Journal of Gynecology, Obstetrics and Neonatal Care, 3*(1), 15-20. <u>https://10.15379/2408-9761.2016.03.01.03</u>

OT Education and Related Competency in Feeding, Eating & Swallowing

Q1 By completing this survey, I understand that this survey is anonymous, and completion is voluntary.

This study is being conducted by Kate Barlow, OTD, OTR/L, IMH-E, Janelle Hatlevig, MA, OTR/L, BCPR, Cuyler Romeo, MOT, OTR/L, SCFES, IBCLC and Thilini Abeywickrema, OT/s. The purpose of this study is to examine the amount of time dedicated to feeding, eating and swallowing education in occupational therapy programs in the US for individuals of all ages. The study was approved through American International College's Institutional Review Board. This 15-question survey was created by the authors and should take approximately 5 minutes to complete. If you have any questions or would like the results of this study, please email kate.barlow@aic.edu.

Please be aware that you are not required to participate in this research and you may discontinue your participation at any time without penalty. You may also omit questions you prefer not to answer. The possible risks associated with participation in this study are minimal, however, you may feel uncomfortable answering questions pertaining to your program's educational practices. Your responses will be provided confidentiality to protect your privacy.

If you agree to voluntarily participate in this research project as described, please indicate your agreement below. If you select yes, you will be directed to the survey. Please print a copy of this consent form now for your reference; thank you for your consideration.

o Yes (1)

o No (2)

Q2 What geographical region is your OT program located in?

o Northeast (CT, MA, ME, NH, NJ, NY, PA, RI, VT) (1)

o Mid-West (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI) (2)

o South (AL, AR, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV) (3)

o West (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY) (4)

Q3 What level of education is your program you are reporting on? (Please do a separate survey for multiple-entry points.)

o Masters in Occupational Therapy	(1))
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o Entry Level Doctorate in Occupational Therapy (2)

Q4 What is your role in the OT Program?

- o Director (1)
- o Full-time Faculty (2)
- o Adjunct Faculty (3)
- o Guest Lecture (4)
- o Other (5) _____

The following questions pertain to Pediatric Feeding, Eating, and Swallowing

Q5 Who teaches the feeding, eating, and swallowing **pediatric** content within your program? Check all that apply:

- \Box OT Director (1)
- OT Full-time Faculty (2)
- □ OT Adjunct Faculty (3)
- □ SLP Full-time Faculty (4)
- □ SLP Adjunct Faculty (5)
- □ Guest Lecture OT (6)
- □ Guest Lecture SLP (7)
- O Other (8) _____

Q6 How many dedicated hours do you allocate to educating students on **pediatric** feeding, eating, and swallowing?

Q6a Of those hours, how many are taught by core OT faculty?

Q7 How are you meeting the ACOTE standard B.4.16. Dysphagia and Feeding Disorders for the **pediatric** population?

(Doctoral and master's degree ACOTE standard B4.16: Evaluate and provide interventions for dysphagia and disorders of feeding and eating to enable performance, and train others in precautions and techniques while considering client and contextual factors.)

Check all that apply:

- □ Lecture (1)
- □ Guest Lecture (2)
- □ Lab (3)
- □ Competencies (4)
- □ Clinical Observation (5)
- Multi-disciplinary Course Collaboration (6)
- □ Case Study Assignment (7)
- Recorded Webinars (8)
- □ Exam (9)
- □ Other (10) _____

Q8 Please check all of the areas students are competent in as a result of the education they received in **pediatric** feeding, eating, and swallowing:

- □ Screen for medical dysfunction (1)
- □ Screening for environmental dysfunction (2)
- □ Screening for posture and coordination dysfunction (3)
- □ Screening for psychosocial dysfunction (4)
- □ Screening for oral motor dysfunction (5)
- □ Screening for swallow dysfunction (6)
- □ Screening for nutrition dysfunction (7)
- \Box Evaluation of feeding (8)

- \Box Evaluation of eating (9)
- \Box Evaluation of swallowing (10)
- Process and purpose of instrumental evaluation (videofluoroscopic swallow study, fiberoptic endoscopic evaluation of swallowing, etc.) (11)
- □ Treatment of feeding (12)
- □ Treatment of eating (13)
- □ Treatment of swallowing (14)
- □ Referring to subspecialities or other ancillary services (15)

Q9 What resources or tools do you need in order to successfully meet the ACOTE standard B.4.16. Dysphagia and Feeding Disorders in **pediatrics**? Prioritize and rate according to importance:

- _____ Slide deck (1)
- _____ Videos (2)
- _____ Guest lectures (3)
- _____ Lab ideas (4)
- _____ Curriculum sharing (5)
- _____ Multi-disciplinary course collaborations (6)
- _____ Clinical observations (7)
- _____ Recorded webinars (8)
- _____ Other (9)

The following questions pertain to Adult Feeding, Eating, and Swallowing:

Q10 Who teaches the feeding, eating, and swallowing **adult** content within your program? Check all that apply:

- \Box OT Director (1)
- □ OT Full-time Faculty (2)
- □ OT Adjunct Faculty (3)

- □ SLP Full-time Faculty (4)
- □ SLP Adjunct Faculty (5)
- \Box Guest Lecture OT (6)
- \Box Guest Lecture SLP (7)
- O Other (8) _____

Q11 How many dedicated hours do you allocate to educating students on **adult** feeding, eating, and swallowing?

Q12 How are you meeting the ACOTE standard B.4.16. Dysphagia and Feeding Disorders for the **adult** population?

(Doctoral and master's degree ACOTE standard B4.16: Evaluate and provide interventions for dysphagia and disorders of feeding and eating to enable performance, and train others in precautions and techniques while considering client and contextual factors.)

Check all that apply:

- \Box Lecture (1)
- □ Guest Lecture (2)
- □ Lab (3)
- \Box Competencies (4)
- □ Clinical Observation (5)
- Multi-disciplinary Course Collaboration (6)
- □ Case Study Assignment (7)
- Recorded Webinars (8)
- □ Exam (9)
- Other (10) _____

Q13 Please check all of the areas students are competent in as a result of the education they received in **adult** feeding, eating, and swallowing:

- □ Screen for medical dysfunction (1)
- □ Screening for environmental dysfunction (2)
- □ Screening for posture and coordination dysfunction (3)
- □ Screening for psychosocial dysfunction (4)
- □ Screening for oral motor dysfunction (5)
- □ Screening for swallow dysfunction (6)
- □ Screening for nutrition dysfunction (7)
- □ Evaluation of feeding (8)
- \Box Evaluation of eating (9)
- \Box Evaluation of swallowing (10)

Process and purpose of instrumental evaluation (videofluoroscopic swallow study, fiberoptic endoscopic evaluation of swallowing, etc.) (11)

- □ Treatment of feeding (12)
- □ Treatment of eating (13)
- □ Treatment of swallowing (14)
- □ Referring to subspecialities or other ancillary services (15)

Q14 What resources or tools do you need in order to successfully meet the ACOTE standard B.4.16. Dysphagia and Feeding Disorders in **adults**? Prioritize and rate according to importance:

- _____ Slide deck (1)
- _____ Videos (2)
- _____ Guest lectures (3)
- _____ Lab ideas (4)
- _____ Curriculum sharing (5)
- _____ Multi-disciplinary course collaborations (6)

_____ Clinical observations (7)

_____ Recorded webinars (8)

_____ Other (9)

Q15 Do you have a designated course for feeding, eating, and swallowing?

- o No (1)
- o Yes (2)

Display This Question:

If Do you have a designated course for feeding, eating, and swallowing? = Yes

Q16 If yes- who teaches that course

- o OT Director (1)
- o OT Full-time Faculty (2)
- o OT Adjunct Faculty (3)
- o SLP Full-time Faculty (4)
- o SLP Adjunct Faculty (5)
- o Other (6) _____

After completing the survey, respondents will get an automated email that says, Thank you for participating in our research. If you would like to continue to this conversation and contribute to future work efforts to improve feeding, eating and swallowing education in academia, please join our Mealtime Occupations: Feeding, Eating and Swallowing Community of Practice (CoP), by completing this survey: https://forms.aota.org/forms/feeding_cop_enrollment_survey

Once you complete the survey, AOTA's CoP representative, Thomas Quinn, will be notified. You will be added to the COP roster, the private CommunOT list and the recurring meeting invite. Thank you for supporting the growth of feeding, eating and swallowing education in occupational therapy.

Appendix B: Full Ranking of Resources/ Tools

Table 3

Ranking of Resources/ Tools to Successfully Meet ACOTE Standards

Ranking		1	2	3	4	5	6	7	8	9	Total responses (n)
Slide deck	Ρ	5	9	4	8	3	4	5	9	1	48
	A	7	3	3	6	7	1	5	5	1	38
Videos	Ρ	28	17	17	5	0	1	1	1	0	70
	A	12	19	12	5	2	1	2	1	1	55
Guest Lecture	Ρ	4	3	4	4	6	6	6	8	1	42
	A	6	2	6	4	3	3	3	8	0	35
Lab Ideas	Ρ	17	24	14	2	2	3	2	1	1	66
	A	14	13	11	7	3	1	0	1	0	50
Curriculum Sharing	Ρ	4	4	4	9	11	5	2	1	0	40
	А	3	2	7	6	5	6	1	0	1	31
Multidisciplinary course collaboration	Ρ	3	2	7	6	5	9	8	4	0	44
	А	1	6	9	6	3	6	2	1	0	34
Clinical observations	Ρ	5	11	13	16	7	3	3	0	0	58
	А	8	7	6	7	8	1	3	0	0	40

Recorded	Р	5	2	3	4	9	4	7	8	0	42	
webinar	A	3	1	0	4	2	4	7	6	0	27	

Note. Pediatrics (P), Adults (A)