Understanding Supervisors' Perspective on Clinical Incompetencies and Challenges in Dysphagia Training for Speech-Language Therapy Students

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ABSTRACT

Background: Improvements in clinical education for speech-language therapy students can be made by identifying common areas of clinical incompetency. This study aimed to explore supervisors' perceptions of undergraduate students' clinical incompetencies and challenges during dysphagia training. **Methods:** An online survey was developed and distributed to speech-language therapy supervisors in Malaysia. The survey was designed to explore supervisors' perceptions of students' clinical incompetencies and challenges during dysphagia training. The responses for 4-point Likert scale questions were analysed descriptively. Then, further analysis was done using repeated-measures ANOVA to compare the means of the categories. For open-ended questions, thematic analysis was carried out. **Results:** A total of 11 supervisors participated in the study. Students demonstrated the highest levels of incompetency in the Management and Planning (92.41%) and FEES (83.64%) categories, followed by Case Notes (86.36%) and Case History (83.63%). Despite non-significant statistical differences, effect sizes highlighted FEES and Management and Planning as the most practically important areas of student incompetence.On the other hand, challenges in dysphagia training were categorized into those related to the student and those related to the clinical environment. Contributing factors included limited theoretical understanding, difficulty applying knowledge to practice, low confidence, and restricted clinical exposure. Supervisors recommended enhancing training approaches, strengthening theoretical instruction, and improving access to appropriate facilities and resources. **Conclusion:** The findings highlight key areas where students face difficulties in achieving clinical competence in dysphagia management. Future research should involve larger and more diverse samples, incorporating perspectives from students and academic staff to further inform curriculum development and promote safer, more effective dysphagia management practices.

INTRODUCTION

A speech-language therapist (SLT) is responsible for evaluating, diagnosing, and providing rehabilitation for individuals with speech, language, communication, swallowing, and related disorders (American Speech-Language-Hearing Association [ASHA], 2016). Dysphagia is defined as an impairment of the swallowing process, clinically characterized by abnormal delay or difficulty in moving a food bolus from the oral cavity to the stomach (Clavé & Shaker, 2015). In the management of dysphagia, early and accurate intervention is critical to prevent complications that may lead to serious morbidity or even mortality (Bakhtiyari et al., 2015; Banda et al., 2022; Hazelwood et al., 2023). Consequently, graduates of speech-language therapy programs must demonstrate entry-level competency to ensure patient safety and high-quality care (Attrill et al., 2022). Competency is broadly defined as the integrated capacity of a practitioner to apply knowledge, skills, attitudes, values, and judgment in real clinical environments (Fernandez et al., 2012; McAllister et al., 2011), thereby performing tasks safely, effectively and ethically. In contrast, incompetency refers to the failure to integrate these essential components, resulting in practice that is inconsistent, unsafe, or below the expected professional standard (Overholser & Fine, 1990).

Insufficient clinical skills or inadequate competence in dysphagia management can negatively affect diagnostic accuracy, delay treatment, and compromise clinical

outcomes (Kitila et al., 2024; Vose et al., 2018). These concerns underscore the importance of effective training and supervision during clinical education to support students in developing the competencies required for safe dysphagia practice. Although establishing competency in dysphagia is a fundamental component of speech-language therapy, several studies have reported that SLTs often rate their self-perceived competence in this area as low (Caesar & Kitila, 2020; Mustaffa Kamal, Ward & Cornwell.,2012b; Vose et al., 2018). While much of the existing research has focused on students' or SLTs' self-assessments of knowledge, confidence, and performance in dysphagia management, relatively little attention has been given to the perspectives of clinical supervisors. Supervisors play a crucial role in bridging the gap between classroom learning and clinical application by mentoring, providing feedback, and ensuring that students achieve professional standards of practice (ASHA, 2008). Their perspectives offer valuable input for curriculum development and help identify areas requiring additional support or training. Therefore, this study aims to explore supervisors' perceptions of common clinical incompetencies and the challenges encountered during dysphagia training. The findings are expected to inform improvements in clinical education and contribute to the development of strategies that enhance student preparedness for safe and effective dysphagia management. Fibreoptic endoscopic evaluation of swallowing (FEES) is an instrumental procedure that uses a flexible endoscope to directly visualise pharyngeal swallowing function and detect swallowing abnormalities (Langmore, Kenneth, & Olson, 1988). FEES was included in the questionnaire as it represents the most commonly used instrumental assessment for dysphagia evaluation in Malaysia (Mustaffa Kamal et al., 2012a).

METHODS

Questionnaire

An online survey was developed and validated for this study. The survey consisted of three sections. There were (A) demographic information, (B) Forty 4-point Likert-scale items (ranging from *not at all* to *frequently*) were used to assess possible incompetencies demonstrated by students during clinical training,and (C) open-ended questions of the challenges during training and recommended solutions. Items in section B are divided into seven categories. The categories are (1) case history, (2) oral motor examination (OME), (3) water and food test, (4) FEES, (5) management and plan, (6) case note and (7) professionalism. These items were formulated with reference to past studies and relevant guidelines (Hewat et al., 2020; Macbean et. al., 2013; Kamal Bahri, 2018; Malaysia Ministry of Health, 2023). The survey was validated by three experienced SLTs and one linguist, and was subsequently pretested. The final version of the survey was administered online via Google Forms, and the estimated completion time for participants was approximately 10–15 minutes.

Procedure

The research obtained ethical clearance from the IIUM Research Ethics Committee (IREC) under reference number IREC 2019-151 before commencement. An invitation link containing the research information was distributed via WhatsApp groups of the Speech-Language Pathologists Association of Malaysia (SPEAK), dysphagia workshop group, and speech-language therapy university alumni. The inclusion criteria required respondents to: (1) be practicing SLTs with more than five years of professional experience; (2) have undergone specialized dysphagia training (e.g., certified courses or postgraduate-level training) or have managed dysphagia cases for at least five years; (3) be currently employed in a hospital or university setting; and (4) have experience in supervising speech-language therapy students in dysphagia-related clinical practice. Several SLTs expressed interest in participating; however, responses from individuals who were not directly involved in student supervision were excluded.

Data Analysis

Statistical analyses for the Likert-scale items identifying clinical incompetencies were conducted using the *Statistical Package for the Social Sciences* (SPSS, Version 25). Internal consistency of the items was assessed using Cronbach's alpha, with values ranging from .749 to .883, indicating acceptable to good reliability. Descriptive statistics, including item frequencies and mean scores for each category, were computed. The percentage of high-occurrence incompetencies was calculated by combining responses that fell within the two highest categories of the rating scale. (Dzulkarnain et al., 2019). A repeated-measures analysis of variance (RM-ANOVA) was performed to examine differences in mean error scores across categories, followed by pairwise comparisons with Bonferroni adjustments to identify significant differences between categories. Effect size calculations were also conducted to complement the interpretation of p-values. Responses to the open-ended questions were analyzed qualitatively using Braun and Clarke's (2006) thematic analysis approach.

RESULTS

Demographic Information

A total of 11 experienced SLTs met all inclusion criteria and were included in the analysis. Respondents ranged in age from 32 to 42 years (M = 37). Most respondents had more than 10 years of professional experience (n = , 81.9%), and nearly half had over 10 years of supervisory experience (n = 5, 45.5%). All participants were employed in government hospitals or universities, except one who was working in a private institution. On average, SLTs reported spending 18.9 hours (SD = 9.32) per semester on providing dysphagia training and 12.45 hours (SD = 10.06) on fiberoptic endoscopic evaluation of swallowing (FEES) training.

Table 1: Respondent demographic information

Demographic variables		*n*
Education	Bachelor's degree	6
	Masters's degree	5
	PhD	-
Supervising experience	1 to 5 years	1
	5 to 10 years	5
	>10years	5
Institution	University	3
	Government Hospital	7
	Private practice	1
Total of hours spent on dysphagia training (one semester)	<10 hours	3
	11 to 20 hours	3
	>20hours	5
Number of hours spent on FEES training (one semester)	<10hours	6
	11 to 20 hours	1
	>20hours	4

Percentage Occurrence of Clinical Incompetencies Among Speech-Language Therapy Students

The percentage distribution of reported clinical incompetencies among speech-language therapy students is summarized in Table 2. The highest-rated area of difficulty overall was in interpreting oral mechanism examination (OME) findings in relation to cranial nerve function, reported by 90.91% of respondents. Other frequently observed areas of incompetence included difficulty in: 1) deciding if a patient passed or failed the water and food test in relation to OME findings (72.73%); 2) relating FEES findings with cranial nerve functions; 3) integrating the results from all the assessments conducted (72.73%) and; 4) inability to make accurate impression or differential diagnosis (81.89%).

Table 2: Descriptive statistics on types of incompetencies made by students as perceived by supervisors.

No	Item	% (*n*)			
		Not at all	Rarely	Occasionally	Frequently
	CASE HISTORY				
1	Unable to conduct a comprehensive history taking.	-	9.09 (1)	45.45 (5)	45.45 (5)
2	Unable to give simple and clear questions.	9.09 (1)	9.09 (1)	54.55 (6)	27.27 (3)
3	Using jargons and medical terms with the patient and/or caregivers.	-	27.27 (3)	45.45 (5)	27.27 (3)
4	Unable to rephrase questions when patients and/or caregivers find it difficult to understand.	-	27.27 (3)	54.55 (6)	18.18 (2)
5	Unable to probe for details and further data/ facts from patient's given information.	-	-	36.36 (4)	63.64 (7)
	ORAL MOTOR EXAMINATION				
1	Demonstrate wrong technique when examining the patient.	18.18 (2)	18.18 (2)	63.64 (7)	-
2	Unable to give correct/appropriate instructions to the patient.	18.18 (2)	36.36 (4)	36.36 (4)	9.09 (1)
3	Unable to relate the findings with cranial nerve functions.	-	-	9.09 (1)	90.91 (10)
4	Incorrect placement of utensil (e.g. use of tongue depressor).	18.18 (2)	36.36 (4)	45.45 (5)	-
5	Unable to relate the findings to determine the type of instrumental assessment to be conducted.	-	18.18 (2)	36.36 (4)	45.45 (5)
	WATER AND FOOD TEST				
1	Unable to decide which consistency to be prioritized when testing with the patient.	-	9.09 (1)	72.73	18.18 (2)
2	Unable to handle patients with sufficient care to ensure safety.	9.09 (1)	18.18 (2)	18.18 (2)	54.55 (6)
3	Unable to differentiate types of food/drink consistencies.	18.18 (2)	45.45 (5)	27.27 (3)	9.09 (1)
4	Unable to prepare the exact drink/food consistencies using food thickener.	18.18 (2)	18.18 (2)	36.36 (4)	27.27 (3)
5	Unable to decide if a patient passed or failed the test in relation to OME findings.	9.09 (1)	9.09 (1)	9.09 (1)	72.73 (8)
6	Unable to decide indication for instrumental assessment.	-	27.27 (3)	27.27 (3)	45.45 (5)
	FIBERENDOSCOPIC EXAMINATION OF SWALLOWING (FEES)				
1	Unable to give correct/appropriate instructions to the patient.	-	36.36 (4)	9.09 (1)	54.55 (6)
2	Unable to relate the findings with cranial nerve functions.	-	-	27.27 (3)	72.73 (8)
3	Unable to identify the correct anatomical structures.	-	27.27 (3)	9.09 (1)	63.64 (7)
4	Unable to interpret the findings from the observation.	-	9.09 (1)	27.27 (3)	63.64 (7)
5	Unable to give feedback to patient and/or caregivers.	-	9.09 (1)	27.27 (3)	63.64 (7)
	MANAGEMENT AND PLAN				
1	Unable to integrate the results of all the assessments conducted.	-	-	27.27 (3)	72.73 (8)
2	Unable to interpret the findings to determine a correct diagnosis.	-	-	36.36 (4)	63.64 (7)
3	Unable to use the findings to determine a comprehensive plan for the patient.	-	9.09 (1)	45.45 (5)	45.45 (5)

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4	Unable to explain the result to the patient.	-	9.09 (1)	63.64 (7)	27.27 (3)
5	Unable to use layman terms when explaining results to the patient.	-	18.08 (2)	36.36 (4)	45.45 (5)
6	Unable to recommend referrals to other professionals if necessary.	-	9.09 (1)	45.45 (5)	45.45 (5)
	CASE NOTE				
1	Unable to come with correct impression or differential diagnosis.	-	9.09 (1)	9.09 (1)	81.89 (9)
2	Unable to write correct notes.	-	18.18 (2)	45.45 (5)	36.36 (4)
3	Unable to write clear notes.	-	18.18 (2)	63.64 (7)	18.18 (2)
4	Unable to write comprehensive notes.	-	9.09 (1)	36.36 (4)	54.55 (6)
	PROFESSIONALISM				
1	Patient was not greeted when entering the room.	36.36 (4)	54.55 (6)	9.09 (1)	-
2	Unable to maintain good manners with the patient.	72.73 (8)	27.27 (3)	-	-
3	Unable to conduct assessment in appropriate sequences.	18.18 (2)	36.36 (4)	27.27 (3)	18.18 (2)
4	Unable to maintain hygiene when dealing with patients.	27.27 (3)	27.27 (3)	27.27 (3)	9.09 (1)
5	Unable to provide consultation using layman terms.	-	18.18 (2)	63.64 (7)	18.18 (2)
6	Unable to maintain a comfortable distance from the patient.	36.36 (4)	54.55 (6)	9.09 (1)	-
7	Unable to appear confident during assessment and result delivery.	-	27.27 (3)	27.27 (3)	45.45 (5)
8	Taking inappropriate time (e.g., too much time or too fast) during assessment.	9.09 (1)	27.27 (3)	36.36 (4)	27.27 (3)

Percentage of high-occurrence incompetencies across categories

The percentage of frequently occurring incompetencies among students was analysed across the various competency categories, with a summary of the findings presented in Figure 1. The *Management and Plan* category demonstrated the highest rate of reported incompetencies (92.41%), followed by the *Case Note* category (86.36%). High levels of incompetency were also noted in the *Case History* (83.63%) and *FEES* (83.64%) domains. Conversely, the *Professionalism* category recorded the lowest frequency of incompetence (39.87%).

Within the Management and Planning category, the highest level of incompetency was related to integrating results from all assessments conducted (72.73%). In the Case Notes category, difficulty in formulating an accurate impression or differential diagnosis was most frequently reported (81.89%). In the FEES category, high levels of incompetency were noted in relating findings to cranial nerve function (72.73%), as well as in identifying anatomical structures, interpreting observational findings, and providing feedback to patients and/or caregivers (each 63.64%).
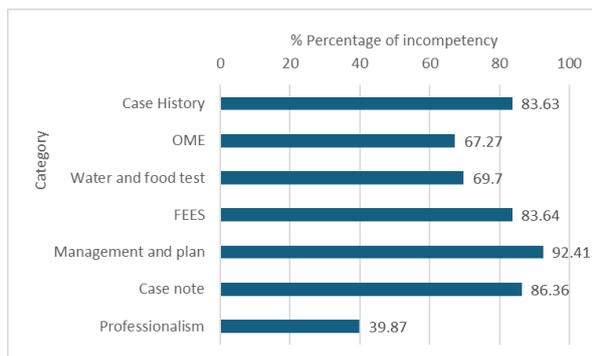
Figure 1: Percentage of high-occurrence incompetencies across categories

Comparison of mean score based on category

To further examine differences in incompetency patterns across categories, mean score comparisons were first conducted (Table 3). The highest mean incompetency scores were observed in the FEES (M = 3.47, SD

= 0.63) and Management and Plan (M = 3.42, SD = 0.47) categories, followed by Case Note (M = 3.34, SD = 0.57). In contrast, the lowest mean incompetency score was recorded in the Professionalism category (M = 2.31, SD = 0.53). These descriptive findings were further examined using RM-ANOVA. Although the RM-ANOVA did not reveal statistically significant differences between categories (p > .005), the effect sizes from the post-hoc comparisons were predominantly large, indicating meaningful practical differences despite the lack of statistical significance. Notably, large effect sizes were consistently observed in comparisons involving the FEES and Management and Plan categories, reinforcing their status as the most common areas of incompetency.

Table 3: Comparison of mean score based on category

Category	Range	Mean Score	Standard Deviation (SD)
Case history	2.2 – 3.8	3.182	0.510
OME	1.8 – 3.4	2.855	0.580
CA and HLE	2.6 – 4.0	3.273	0.531
Water and food test	1.67 – 4.0	2.985	0.710
FEES	2.2 – 4.0	3.473	0.628
Management and plan	2.5 – 4.0	3.424	0.472
Case note	2.25 – 4.0	3.341	0.573
Professionalism	1.38 – 2.88	2.307	0.530

Table 0: Post-hoc analysis of the eight categories

(I) Category	(J) Category	p-value	Cohen-d	Effect size
Case history	OME	.213	0.59876654	large
	Water and food test	1.00	0.318696803	medium
	FEES	1.0	-	large

		0	0.98068231	
	Management and plan	.493	-0.49250308	medium
	Case note	1.00	-0.29313325	small
	Professionalism	.000*	1.68238 1245	large
OME	Water and food test	1.000	-0.20053468	small
	FEES	.000*	-1.02237202	large
	Management and plan	.001*	-1.07609322	large
	Case note	1.00	-0.84300267	large
	Professionalism	.003*	0.98638717	large
Water and food test	FEES	.110	-0.72808091	large
	Management and plan	.305	-0.72819377	large
	Case note	1.000	-0.55181232	large
	Professionalism	.010*	1.08220 5815	large
FEES	Management and plan	1.000	0.08820 8285	small
	Case note	1.000	0.21958 6682	small
	Professionalism	.000*	2.00664 3942	large
Management and plan	Case note	1.000	0.15811 4887	small
	Professionalism	.000*	2.22581 5146	large
Case note	Professionalism	.007*	-1.87346 357	large

Supervisors' Perceptions of Speech-Language Therapy Students' Challenges During Dysphagia Clinical Training

Students' Challenges During Dysphagia Clinical Training

As summarized in Table 5 these challenges were grouped into two main perspectives: (1) challenges related to the students and (2) challenges related to the clinical environment. A majority of supervisors (72.73%, *n* = 8) reported that the primary challenge faced by students was the difficulty in applying theoretical knowledge to clinical practice. One supervisor noted that undergraduates often struggled to "integrate theory into practical aspects and conclude the findings." Additionally, a considerable proportion of respondents identified a lack of theoretical knowledge and low confidence levels (54.55%, *n* = 6, respectively) as recurring issues. For instance, one supervisor observed that students were "not able to explain the normal swallowing process in detail," while another highlighted that undergraduates "lack confidence and are often fearful of handling dysphagic patients, especially those with multiple medical conditions and supportive devices." In regard to challenges related to the clinical environment, most supervisors (45.45%, n = 5) reported that students had limited opportunities to encounter dysphagia patients. One supervisor commented, "unless they are posted in hospitals with many dysphagic patients."

Recommended solutions

Based on the qualitative analysis, three main themes of recommendations emerged, as summarised in Table 6. Qualitative analysis revealed three main themes of recommendations, as summarized in Table 6. Supervisors emphasized increasing clinical training by allocating specific contact hours for dysphagia cases (63.64%, n = 7), placing students in settings with more dysphagia patients (27.27%, n = 3), and enhancing the application of theoretical knowledge to practice (9.09%, n = 1). Strengthening theoretical knowledge was also recommended through independent learning (18.18%, n = 2) and offering adequate dysphagia lectures or classes (18.18%, n = 2), with one supervisor suggesting "two semesters of dysphagia course." Additionally, 18.18% (n = 2) recommended providing advanced learning facilities, including a "dysphagia lab.

Table 5: Challenges faced by undergraduates during dysphagia clinical training

Theme	Subtheme	Examples	% (*n*)
Challenges related to student	Lack of theoretical knowledge	"Not able to explain normal swallowing process in detail."	54.55 (6)
	Lack of application of knowledge into practice	"To integrate theory into practical aspects"	72.73 (8)
	Lack of training in report writing	"Lack of proper training in report writing & documentation"	9.09 (1)
	Lack of confidence	"Lack of confidence and always feel scared of handling dysphagic patient especially those with multiple medical issues…"	54.55 (6)
Challenges related to clinical environment	Lack of opportunity to meet dysphagia patient	"Rarely seen dysphagia case unless they are posting in hospitals with many dysphagic patients."	45.45 (5)
	Lack of opportunity to conduct instrumental assessment	"Lack of hours in observing and conducting instrumental assessments."	18.18 (2)
	Lack of advance tools	"No mannequin provided for students to learn to assess using instruments"	9.09 (1)

Table 6: Recommended solutions

Theme	Subtheme	Examples	% (*n*)
Provide more training	Increase clinical hours for seeing dysphagia patients to graduate	"Ensure that students maintain a logbook with specific hours dedicated to dysphagia, including observation, handling instruments, and managing dysphagia cases."	63.64 (7)
	Attachment at facilities with more dysphagia patients	"To attach with state hospital or national reference hospital."	27.27 (3)
	Enhance application of theoretical knowledge to practice	"University need to teach student how to plan swallowing management from A to Z holistically."	9.09 (1)
Improve theoretical knowledge	Encourage independent learning	"Encourage the use of smartphones to read journal articles and learn about potential causes of dysphagia related to the patient's medical diagnosis."	18.18 (2)
	Provide adequate class/lecture	"Introduce dysphagia management for two semesters."	18.18 (2)
Provide advance facilities/ encourage usage of		"Have a dysphagia lab with mannequin and instruments and tools used in assessment and management of dysphagia."	18.18 (2)

advance	
facilities	

DISCUSSION

This study explored supervisors' perceptions of the common clinical incompetencies, and challenges faced by speech-language therapy students during dysphagia training. The findings revealed that the highest occurrence of incompetencies was in the FEES and management and planning categories.

Difficulties in observation and interpreting FEES are well documented, as the procedure is technically demanding and requires both clinical experience and a strong understanding of anatomical and physiological mechanisms (Colodny, 2002; Langmore et al., 2022; Pilz et al., 2016). The ability to accurately interpret instrumental assessments such as FEES depends on the clinician's capacity to identify relevant anatomical structures and relate the findings to physiological function (Wooi, Scott, & Perry, 2002; Scholten & Russell, 2000). Supervisors in this study also observed that students often lacked sufficient theoretical knowledge, particularly in anatomy and physiology. This observation aligns with previous studies showing that both students and clinicians often struggle to master these foundational concepts (Martin, Bessel, & Scholten, 2014).

Limited clinical exposure to dysphagia cases may also contribute to these challenges, as noted by the supervisors. Opportunities for students to observe or conduct FEES assessments are largely dependent on the availability of equipment and expertise in the clinical setting. This is particularly relevant in Malaysia, where most SLTs primarily manage pediatric language disorders rather than adult dysphagia (Chu et al., 2019; Mustaffa Kamal et al., 2012a). Consequently, students' clinical experience may be influenced by their supervisors' caseloads (McAllister, 2005), potentially leading to variable exposure to dysphagia cases. Resource limitations, inadequate working space, and a shortage of trained educators to conduct instrumental assessments further exacerbate this issue (Mustaffa Kamal et al., 2015).

Frequent incompetencies in the management and planning category suggest that students may struggle to integrate assessment results into accurate impressions and individualized care plans, reflecting gaps in clinical reasoning and the application of theoretical knowledge (Brackenbury et al., 2014; Scholten, 2001). When theoretical and practical training are not well integrated, students may find it challenging to translate classroom learning into clinical practice (Brackenbury et al., 2014). These findings highlight the need for more practice-based training, consistent with Kolb's (1984) experiential learning theory, which emphasizes learning through experience.

The importance of practical learning in speech-language therapy training has been highlighted, with innovations in clinical placements and supervisory models described or proposed to support competency development (Joginder Singh et al., 2019; Sheepway et al., 2011). Programs in Malaysia and internationally have begun to incorporate active learning components within coursework (Ahmad Nordin, 2025; Affoo et al., 2020; Burda & Hageman, 2015; Burda et al., 2022). However, consideration remains as to whether current dysphagia-related coursework sufficiently supports students in managing the complexity of clinical practice. Vose et al. (2018) reported that many universities offer only a single swallowing course, which may be associated with more limited opportunities for in-depth learning. Consistent with this, supervisors in the current study recommended expanding coursework to better support the development of dysphagia-related competencies.

To address limitations in exposure to dysphagia patients and instruments, supervisors emphasized the need for a specific logbook to document encounters, as well as the provision of advanced tools and facilities to enhance hands-on experience. Research suggests that extended dysphagia training and the use of a dysphagia lab can improve students' confidence and competency (Graville, Palmer, & Gorsek, 2015; Wagner & Malandraki, 2016). However, access to such resources may be limited in our context, and these approaches can be resource-intensive. Therefore, more sustainable alternatives, such as simulation studies, may provide additional opportunities for students to gain practical experience in a controlled and safe environment. ,

CONCLUSIONS AND LIMITATIONS

This study identified key areas of clinical incompetency and challenges faced by undergraduate speech-language therapy students during dysphagia training. Supervisors reported the highest incompetency rates in FEES interpretation and management planning, reflecting gaps in applying theoretical knowledge to clinical reasoning. Limited theoretical understanding, low confidence, and restricted clinical exposure were among the main contributing factors.

The findings highlight the need to enhance dysphagia education through additional coursework and improved access to dysphagia cases and instrumental assessment facilities to strengthen practical competence. However, the small sample size and reliance on self-reported data may limit generalizability. Future studies should include larger and more diverse samples, as well as student and academic perspectives, to broaden understanding. Overall, these findings offer important insights to guide

curriculum enhancement and promote safer, more effective dysphagia management practice.

REFERENCES

Adams, S. N., & Coutts, K. (2025). The use of simulation in the assessment and management of dysphagia: A scoping review. *Clinical Simulation in Nursing, 98*, Article 101661. https://doi.org/10.1016/j.ecns.2024.101661

Ahmad Nordin, N. (2025). *The Development of An Interactive Self-training System for Dysphagia Management* [Unpublished doctoral dissertation]. International Islamic University Malaysia.

Affoo, R., Bruner, J., Dietsch, A., Nellenbach, C., Jones, T., & Lehman, M. (2020). The Impact of Active Learning in a Speech-Language Pathology Swallowing and Dysphagia Course. *Teaching and Learning in Communication Sciences & Disorders*, *4*(2). https://doi.org/10.30707/TLCSD4.2/POPG6689

American Speech-Language-Hearing Association. (2008). *Clinical supervision in speech-language pathology* [Technical report]. https://www.asha.org/policy

American Speech-Language-Hearing Association. (2016). *ASHA's interprofessional education/interprofessional practice (IPE/IPP) activities and collaborations.* Retrieved from http://www.asha.org/Practice/IPE-IPP-Activitiesand-Collaboration

Attrill, S. L., McAllister, S., & Brebner, C. (2022). Not too little, not too much: supervisor perceptions of work-readiness of speech-language pathology graduates. *Advances in Health Sciences Education*, *27*(1), 87–106. https://doi.org/10.1007/s10459-021-10073-8

Bakhtiyari, J., Sarraf, P., Nakhostin-Ansari, N., Tafakhori, A., Logemann, J., Faghihzadeh, S., & Harirchian, M. H. (2015). Effects of early intervention of swallowing therapy on recovery from dysphagia following stroke. In Iran J Neurol (Vol. 14, Issue 3). http://ijnl.tums.ac.ir

Banda, K. J., Chu, H., Kang, X. L., Liu, D., Pien, L. C., Jen, H. J., Hsiao, S. T. S., & Chou, K. R. (2022). Prevalence of dysphagia and risk of pneumonia and mortality in acute stroke patients: A meta-analysis. *BMC Geriatrics, 22*(1), Article 60. https://doi.org/10.1186/s12877-022-02960-5

Brackenbury, T., Folkins, J. W., & Ginsberg, S. M. (2014). Examining educational challenges in communication sciences and disorders from the perspectives of signature pedagogy and reflective practice. *Contemporary Issues in Communication Science and Disorders, 41*, 70–82.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Burda, A., Brotherthon, J., & Duitscher, K. (2022). The cranial nerve exam: Effectiveness of peer-to-peer teaching and experiential learning in speech-language pathology graduate students. *Teaching and Learning in Communication Sciences & Disorders, 6*(3). https://doi.org/10.30707/tlcsd6.3.1664996985.093189

Burda, A., & Hageman, C. (2015). Problem-based learning in speech-language pathology: Format and feedback. *Contemporary Issues in Communication Science and Disorders, 42*, 47–71. https://doi.org/10.1044/cicsd_42_S_47

Caesar, L. G., & Kitila, M. (2020). Speech-Language Pathologists' Perceptions of Their Preparation and Confidence for Providing Dysphagia Services. *Perspectives of the ASHA Special Interest Groups*, *5*(6), 1666–1682. https://doi.org/10.1044/2020_persp-20-00115

Chu, S. Y., Khoong, E. S. Q., Ismail, F. N. M., Altaher, A. M., & Razak, R. A. (2019). Speech-language pathology in Malaysia: Perspectives and challenges. *Perspectives of the ASHA Special Interest Groups, 4*(5), 1162–1166. https://doi.org/10.1044/2019_pers-sig17-2019-0005

Clavé, P., Shaker, R. Dysphagia: current reality and scope of the problem. *Nat Rev Gastroenterol Hepatol* **12**, 259–270 (2015). https://doi.org/10.1038/nrgastro.2015.49

Colodny, N. (2002). Interjudge and intrajudge reliabilities in fiberoptic endoscopic evaluation of swallowing (FEES®) using the penetration–aspiration scale. *Dysphagia, 17*(4), 308–315. https://doi.org/10.1007/s00455-002-0073-0

Dzulkarnain, A. A. A., Rahmat, S., Ismail, A. W., Musa, R., Badzis, M., & Tengku Zam Zam, T. Z. A. (2019). A novel computer-based simulated learning environment in audiology with learning assistance: Preliminary findings. *Medical Journal Malaysia*, *74*(2), 168–173.

Fernandez, N., Dory, V., Ste-Marie, L. G., Chaput, M., Charlin, B., & Boucher, A. (2012). Varying conceptions of

competence: An analysis of how health sciences educators define competence. In *Medical Education* (Vol. 46, Issue 4, pp. 357–365). https://doi.org/10.1111/j.1365-2923.2011.04183.x

Fuller, F. M. (2021). *Speech-language pathologist confidence in dysphagia management* (Unpublished master's thesis). Arkansas State University. https://arch.astate.edu/all-etd/330

Graville, D. J., Palmer, A. D., & Gorsek, S. (March, 2015). Teaching dysphagia skills to graduate students: Experiences with a competency-based program. Poster presentation at the annual meeting of the Dysphagia Research Society, Chicago, IL.

Hazelwood, R. J., Armeson, K. E., Hill, E. G., Bonilha, H. S., & Martin-Harris, B. (2023). Relating Physiologic Swallowing Impairment, Functional Swallowing Ability, and Swallow-Specific Quality of Life. *Dysphagia*, *38*(4), 1106–1116. https://doi.org/10.1007/s00455-022-10532-3

Hewat, S., Penman, A., Davidson, B., Baldac, S., Howells, S., Walters, J., Purcell, A., Cardell, E., McCabe, P., Caird, E., Ward, E., & Hill, A. E. (2020). A framework to support the development of quality simulation-based learning programmes in speech–language pathology. *International Journal of Language and Communication Disorders*, *55*(2), 287–300. https://doi.org/10.1111/1460-6984.12515

Joginder Singh, S., Tan, T. M., & Mustaffa Kamal, R. (2019). Speech-language pathology clinical education in Malaysia: Current practice and future direction. Speech, Language and Hearing. https://doi.org/10.1080/2050571X.2019.1585680

Kamal Bahri, N. (2018). *Development and validation of questionnaire on audiology students' clinical errors* (Unpublished bachelor's dissertation). International Islamic University Malaysia.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Kitila, M., Borders, J. C., Krisciunas, G. P., McNally, E., & Pisegna, J. M. (2024). Confidence, Accuracy, and Reliability of Penetration-Aspiration Scale Ratings on Flexible Endoscopic Evaluations of Swallowing by Speech Pathologists. *Dysphagia*, *39*(3), 504–513. https://doi.org/10.1007/s00455-023-10635-5

Kwan, C. C. Y., Weir, K. A., Fong, R., Pereira, V. J., & Law, T.

(2025). *Integration of team-based learning and simulation-based learning in clinical education of infant feeding and swallowing assessment and management of speech-language pathology students: A retrospective pre-post intervention study.* BMC Medical Education, 25, 1228. https://doi.org/10.1186/s12909-025-07721-7

Langmore, S.E., Kenneth, S.M.A. & Olsen, N. Fiberoptic endoscopic examination of swallowing safety: A new procedure. *Dysphagia* **2**, 216–219 (1988). https://doi.org/10.1007/BF02414429

Langmore, S. E., Scarborough, D. R., Kelchner, L. N., Swigert, N. B., Murray, J., Reece, S., Cavanagh, T., Harrigan, L. C., Scheel, R., Gosa, M. M., & Rule, D. K. (2022). Tutorial on clinical practice for use of the fiberoptic endoscopic evaluation of swallowing procedure with adult populations: Part 1. *American Journal of Speech-Language Pathology, 31*(1), 163–187. https://doi.org/10.1044/2021_AJSLP-20-00348

Macbean, N., Theodoros, D., Davidson, B., & Hill, A. E. (2013). Simulated learning environments in speech-language pathology: An Australian response. *International Journal of Speech-Language Pathology, 15*(3), 345–357.https://doi.org/10.3109/17549507.2013.779024

Malaysia Ministry of Health. (2023). *Prosedur operasi standard penjagaan pesakit dengan kecelaruan pengambilan makanan (feeding) dan kecelaruan penelanan.* https://hq.moh.gov.my/alliedhealth/index.php/ms/penerbitan/prosedur-operasi-standard

McAllister, S., Lincoln, M., Ferguson, A., & McAllister, L. (2011). A systematic program of research regarding the assessment of speech-language pathology competencies. *International Journal of Speech-Language Pathology*, *13*(6), 469–479. https://doi.org/10.3109/17549507.2011.580782

Mustaffa Kamal, R., Ward, E. C., Cornwell, P., & Sharma, S. (2015). Provision of dysphagia services in a developing nation: Infrastructural challenges. *International Journal of Speech-Language Pathology, 17*(6), 594–604. https://doi.org/10.3109/17549507.2015.1026276

Mustaffa Kamal, R., Ward, E., & Cornwell, P. (2012a). Dysphagia management practices among speech-language pathologists in Malaysia. *Journal of Speech, Language and Hearing Research, 15*(2), 111–128. https://doi.org/10.1179/jslh.2012.15.2.111

Mustaffa Kamal, R., Ward, E., & Cornwell, P. (2012b). Dysphagia training for speech-language pathologists: Implications for clinical practice. *International Journal of Speech-Language Pathology, 14*(6), 569–576. https://doi.org/10.3109/17549507.2012.713394

Overholser, J. C., & Fine, M. A. (1990). Defining the boundaries of professional competence: Managing subtle cases of clinical incompetence. Professional Psychology: Research and Practice, 21(6), 462-469.

Pilz, W., Vanbelle, S., Kremer, B., van Hooren, M. R., van Becelaere, T., Roodenburg, N., & Baijens, L. W. J. (2016). Observers' agreement on measurements in fiberoptic endoscopic evaluation of swallowing. *Dysphagia, 31*(2), 180–187. https://doi.org/10.1007/s00455-015-9673-7

Scholten, I. (2001). Teachers' conceptions of their role in improving students' preparation for clinical work in dysphagia. *American Journal of Speech-Language Pathology, 10*(4), 343–357. https://doi.org/10.1044/1058-0360(2001/029)

Scholten, I., & Russell, A. (2000). Learning about the dynamic swallowing process using an interactive multimedia program. *Dysphagia, 15*(1), 10–16. https://doi.org/10.1007/s004559910004

Vose, A. K., Kesneck, S., Sunday, K., Plowman, E., & Humbert, I. (2018). A survey of clinician decision making when identifying swallowing impairments and determining treatment. *Journal of Speech, Language, and Hearing Research*, *61*(11), 2735–2756. https://doi.org/10.1044/2018_JSLHR-S-17-0212

Wagner, E. M., & Malandraki, G. A. (2016). The development and impact of a university-based dysphagia research clinic in the education of graduate students. Perspectives of the ASHA Special Interest Groups, 1(13), 113–121. https://doi.org/10.1044/persp1.SIG13.113

Wooi, M., Scott, A., & Perry, A. (2001). Teaching speech pathology students the interpretation of videofluoroscopic swallowing studies. *Dysphagia, 16*(1), 32–39. https://doi.org/10.1007/s00455000004