

BANGALORE SPEECH AND HEARING TRUST

Journal of Hearing Language and Speech

ENGLISH HALF YEARLY

VOLUME 2 | ISSUE 2 | KARENG/2022/83838-BENGALURU | January-June 2024 | PRICE: Rs. 700/-

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Information about the journal

The JHLS is a biannual publication of the Bangalore Speech and Hearing Trust.

Aims and Scope

JHLS publishes papers in both clinical and basic research related to hearing, balance, speech – language and swallowing. Articles accepted will be research articles, case studies, tutorials, perspective articles, policy and practice briefs and resource reviews. The articles selected will be peer reviewed. All articles are protected by copyright. Although care is taken in selection of articles, no legal responsibility for errors of omission will be accepted by either the author, editors, or publisher. No warranty is made for the content in the journal.

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Dr. N. Rathna
B.A, B.Ed., (Mysore), M.A.T. (INDIANA)
M.A. Ed.D (Gallaudet)
(1934 - 2024)

Obituary



Dr. N. Rathna

B.A, B.Ed., (Mysore), M.A.T. (INDIANA)

M.A. Ed.D (Gallaudet)

Former Director, All India Institute of Speech and Hearing (AIISH), Mysuru.

**Former Director, Ali Yavar Jung National Institute of Speech and Hearing Disabilities
(formerly AYJHIHH), Mumbai.**

Dr. N. Rathna would have been 90 this December. An occasion that we would have all celebrated. In fact, his life itself was a celebration. He was a unique human being – a family man, teacher, professional, actor, playwright, author, and counsellor – roles that he played with elan. I would like to touch upon each of these facets.

His father Dr. Natesh was trained in deaf education from the U.S and was heading the deaf and blind school at Mysore. He was also the director of All India Radio. The son’s choice of education and his passion were influenced by these. Dr. Rathna did his B.A from Maharaja’s college, Mysore, where, according to his friends, he was not serious about his studies. His handwriting kept his scores further down. But he was instrumental in organizing the cultural troupe and bringing out a magazine. He also obtained a B.Ed and later on went to the U.S to get his masters in special education. Noted Kannada writer Ha Ma Nayak once recalled the casual manner of Dr. Rathna even in the American environment – “It was as if Rathna was coming out of Maharaja college hostel!”. This simple manner stayed with him all through.

As a family man, Dr. Rathna was very lucky. His was a model family that all of us admired. He also had a remarkable ability to strike friendships. He would make friends instantly and the friendship would be long lasting. I met the families of these friends and they said they are proud of him and that their relation continued till the end. His thinking was novel. His company was fun and valuable at the same time. He was highly empathetic and responded to the needs of others. My friends used to say “Meshtru has X-ray eyes”. As a person, he seemed to be an atheist but he respected all the good things in all religions and cultures. He had as much concern for the environment as he had for people. He would not tolerate wasting food or talking ill of anybody. He was truly an ‘Ajathashatru’ - one without enemies. I must mention here that in our association of more than five decades, I have not once seen Dr. Rathna getting angry. My colleagues and friends also vouch for this. In situations that made us angry, he would be stoic.

Coming to Dr. Rathna as a teacher, it was for the first time that we found a teacher who would say “I don’t know”. It was shocking at first but it soon turned into admiration as he discussed and probed and gave out relevant information and then finally raised more questions. We would not forget those interactions which were innumerable. A group would always be around him for such stimulating interactions, more so outside the class rooms - in places as varied as his office or on the steps of the institute or near the scooter stand. It was his idea to start producing teachers for our profession while it was in its infancy. He started the master’s program in the field of speech and hearing which resulted in having wonderful teachers to start the undergraduate courses in the field all over the country. His priority at the All India Institute of Speech and Hearing was to create a learning environment for students.

Coming to his professional achievements, as the founding father of the profession he helmed not just AIISH, but even AYJNIHH. He was actively involved in the development of norms and test materials for Indian population early on in his career and he also encouraged research in this nascent field. Dr. Rathna’s contributions in influencing government policies and creating awareness about disabilities are well known. Dr. Rathna was an excellent therapist. Like in other spheres of his life, he treated all those who came seeking rehabilitation, with equal care and respect. ISHA has honoured him by instituting an oration award in his name.

His idea of screening camps, which he led often, was immensely useful to the community. It is worth mentioning here that Dr. S.R. Chandrasekhar organized one such camp for speech and hearing disorders in the year 1975, at Bengaluru. I participated in that camp as a master’s student. Dr. Chandrasekhar then realised the need for such services and started an Institute with the help of Lions club of Bengaluru East. It has now grown to its present impressive heights. Dr. Rathna always supported ventures such as these and it is heartening that his students have been the guiding forces of this institute.

Dr. Rathna was well known in the theater circles as a playwright. He founded the amateur theater group “Samathento” and was part of it until the end. The troupe has given a large number of good plays to the spectators at Mysore and elsewhere. He influenced his Speech and Hearing students to take a keen interest in drama and many have done so. He was also a visiting professor at the fine arts college at Mysore university. Being a rehabilitation professional, he presented plays on disability in the right perspective. Not many know that he won the Life Time Achievement Award for his contribution to Theater from the Karnataka Natak Academy and Best Supporting Actor award for his role in the movie “Rishya Shrunga”

Dr. Rathna was a wonderful counsellor. A role, he said gave him immense satisfaction. We learned to counsel clients at the institute by seeing him doing it. He continued to counsel clients even when he was the director and in the late hours of the day. He mentored and guided many people in his professional and personal capacity.

We, his students, professional colleagues, friends from the field of theater, and his extended family consisting of those whose lives he touched will miss Dr. N. Rathna. Jiddu Krishnamurthy, the philosopher said that death is like a leaf falling from the tree. In Dr. Rathna’s case, it feels as if a beloved tree in front of our home has fallen.

G. Purushottama
Former Professor, All India Institute of Speech and Hearing
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Dysphagia teleassessment challenges faced by speech and swallow pathologists in India during COVID-19 period - A Questionnaire Study

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Abstract

Purpose: Teleassessment of communication and swallowing disorders increased in the 21st century. The teleassessment of dysphagia started a little later. With the onset of the COVID-19 pandemic, a shift was made from face-to-face (FTF) assessment to tele-assessment of dysphagia. The aim of this study was to evaluate the challenges faced by speech swallow pathologists during COVID-19 period.

Method: A 42-item questionnaire was created and validated by experienced speech-language pathologists. The questions were on demographics, job status, clinical experience in dysphagia, food textures used in assessment, dysphagia diagnosis, and challenges faced by speech language pathologists (SLPs) during teleassessment.

Results: 113 completed responses to the questionnaire were received from SLPs. The number of SLPs working with dysphagia was 64. The majority of the SLPs were female and working full-time primarily in hospitals and institutions. The types of cases that were seen for dysphagia therapy varied. The majority had neurological causes with smaller numbers associated with trauma. Almost all of SLPs treated adults with dysphagia. Challenges faced were network variability, visibility, audibility, and following instructions by patients. A large number of SLPs voted teleassessment as a useful method for conducting dysphagia treatment and assessment in the Indian context, though a small number did not.

Conclusion: Dysphagia assessment and therapy are possible in the telemode, and may be offered to those who cannot travel. The development of a protocol for assessment and therapy is necessary.

Keywords: dysphagia, teletherapy, teleassessment,

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Introduction

Teleassessment can be described as the delivery of clinical assessment using any of the distance communication utilities such as the telephone, and currently the internet. Timely access to speech pathology services for dysphagia assessment often gets delayed, mainly due to the smaller number of specialists catering to this problem. Individuals with dysphagia living in remote areas, in particular, have little or no access to such services owing to distance, mobility, travel inconveniences, etc. The evaluation of dysphagia either by subjective or objective means is crucial for the appropriate management of swallowing difficulty. Dysphagia evaluation has always been carried out one-to-one, as it requires the examination of structures and functions of oral and pharyngeal areas with different food textures and consistencies. Due to the COVID-19 pandemic outbreak, face-to-face dysphagia assessments have taken a back seat as speech language pathologists are apprehensive about the transmission of COVID-19 between patients and professionals (Miles et al., 2021). One of the novel and innovative solutions for providing clinical services during the pandemic was through telemode. Supported by evidence-based practice, there has been an increase in the teleassessment of dysphagia (Ward, Burns, Theodoros and Russell, 2014). The term ‘teledysphagia’ has emerged as a result of recent efforts to employ and research the merging of telepractice and dysphagia (Coyle, 2012).

Telehealth services have been very common in practice in developed countries, both the American Academy of Audiology (2005) and the American Speech-Language-Hearing Association (2008) have

developed position statements supporting the use of telehealth services. Telehealth was primarily developed for patients with limited access to health care, validated for efficacy and cost-effectiveness, and equivalent to those achieved via face-to-face measures (Fabry, 2010).

Clinicians in Australia, Japan, and the United States, have explored the possibility of using telehealth to diagnose, assess, and provide treatment to individuals with communication and swallowing disorders for those who are in rural areas or have limited access to these services (Mashima & Doarn, 2008). A systematic review by Molini-Avejonas, Rondon-Melo, Amato, and Samelli (2015) indicated that across the United States of America and Australia, only a few of telehealth studies were reported in the area of swallowing. This study later emphasized the need for early diagnosis and intervention in the field of dysphagia, considering the associated morbidity and mortality risks. The study also confirmed that valid and reliable assessment of speech disorders can be achieved via telehealth and that it could be a good tool for providing access to care and long-term care. Similarly, there are multiple studies carried out on this subject of tele-assessment.

Lalor, Brown, and Cranfield (2000) reported a case study of a person with dysphagia who had undergone assessment through telemode. This being in its initial days of tele-assessment, clinicians faced issues such as low-resolution camera and immobility of the camera. However, this case study report sent a positive signal for the proposition for subjective clinical swallow examination through video conference. Ward, Crombie, Trickey, Hill, Theodoros and Russell (2009) performed swallowing assessment of 10 laryngectomy patients

using a purpose-designed, multimedia video conferencing system using a freestanding and self-focusing camera. They used a commercial 3G phone network and reported that there were occasional difficulties with audio delays and image distortion. However, the patient and clinical satisfaction on tele dysphagia assessment was high. The teleassessment mode was further explored by other researchers. Sharma, Ward, Burns, Theodoros and Russell (2011) reported of high agreement between the face-to-face SLP and tele SLP assessment of 10 simulated patients with dysphagia. The high reliability observed between tele dysphagia assessment and face to face assessment suggested the feasibility of telemode assessment.

Sharma, Ward, Burns, Theodoros, and Russell (2013) studied mixed study designs involved in the examining outcomes of tele dysphagia assessment of 100 patients. The study findings indicated that there were minimal technical difficulties and supported that the outcomes of face-to-face assessment and telemode are comparable. They also reported that patient satisfaction was high and there was good rapport between clinician and patient. The authors identified that the presence of skilled staff and good general organization were key factors for the success of the teledysphagia assessment.

From these studies, it is thus evident that there is high scope in practicing tele-assessment in identifying swallowing disorders. The success of providing quality service in the field of swallowing assessment calls for a need to identify the challenges that a speech and swallowing pathologist will be facing while carrying out teleassessment for swallowing disorders, particularly in India.

The need for research

The unexpected situation posed by the swift COVID-19 pandemic brought the direct clinical practice of speech-language pathology to a standstill. During this alarming phase, medical services deemed as essential were functional, and those considered non-essential were either deferred for later or carried out in telemode. Thus, self-assessment for conditions such as autism, attention deficit hyperactivity disorder, cerebral palsy, hearing impairment, stuttering, dysarthria, aphasia, and dysphagia gained universal acceptability and also a surprising popularity. The pandemic caused a drastic transition to tele service mode of practice without giving a time-window for preparation since tele service was a relatively a new approach, especially for dysphagia rehabilitation. The adoption of this mode put forth numerous unforeseen hurdles for the practitioners, both young and experienced alike. There is a dearth of studies from India that have focused on understanding the impediments and stumbling blocks experienced by the clinicians and the patients alike, while delivering and receiving dysphagia tele-rehabilitation. Identifying these challenges will pave the way for the formulation of solutions, and thereby further strengthening and making progress in the field of teleassessment and telemanagement of swallowing disorders.

Therefore, in this study, we aimed to understand the challenges faced by the SLPs in India in carrying out teleassessment for persons with dysphagia during the outbreak of COVID-19 from 2020 to 2021.

Method

The present study was conducted after obtaining clearance from the institutional review

board and institutional ethics committee of Dr. S. R. Chandrasekhar Institute of Speech and Hearing. The study design followed was a cross-sectional study design which was conducted between 2020-2021. The participants recruited for the study were registered members of the Indian Speech and Hearing Association (ISHA).

The sample size was calculated for the estimation of the population proportion. At a 5% level of significance, 80% power, 5% margin of error, and the sample proportion was taken as 80%, the minimum required sample size was 246.

The present study was conducted in 3 stages:

Stage 1: Development and Content Validation of the questionnaire

Stage 2: Administration of the Questionnaire to the SLPs

Stage 3: Analysis of the Responses from the Questionnaire

Stage 1: Development and Content Validation of the survey questionnaire

The questions were formulated after reviewing the literature on telehealth practices in the fields of speech, language, communication, and hearing sciences. The following factors were considered when formulating the questionnaire to ensure ease of administration. Close-ended questions ranged from those with dichotomous response options (yes/no), multiple-choice options, or Likert rating scales. Multiple-choice questions required respondents to select one of several options, with specific instruction such as “select only one,” and some questions with an option to select “all that apply.”

The generated questionnaire was content validated by five speech and hearing professionals

with a minimum of five years experience in the field of research, and who are currently active in the hospital and/or clinical setup. The questionnaire’s content was validated to ensure appropriateness and clarity. The SLPs were provided with 4 response options to rate each question in the questionnaire - “extremely useful,” “helpful,” “neither helpful nor unhelpful,” and “unhelpful.”

The final questionnaire had a 42 items based on following broad domains:

Demographics and Job status. Four questions were about demographics, and five questions pertained to job status.

Clinical Experience in dysphagia. Ten questions were about clinical experience in dysphagia, the case load and type of dysphagia as well as assessment done Pre COVID 19 pandemic.

Practice of SLPs in Assessment: Questions 19 to 26 dealt with mode of assessment during COVID 19 lockdown, food texture and dysphagia diagnosis made.

Challenges faced: Questions 27 to 39 focused on challenges or problems faced by SLPs during tele-assessment, including internet issues, patient location, conducting the Oral Peripheral Mechanism Examination (OPME), viewing of anterior spillage, etc. For those who did not provide therapy for dysphagia, their attitude to tele-assessment was evaluated from questions 10-15.

The Google form was pilot tested on 10 participants to identify any inaccuracies and redundancies. There were no changes made as participants were able to understand questions and

did not report any inaccuracy. The final questionnaire may be seen in the Appendix.

Stage 2: Administration of the Questionnaire to the SLPs

These questions were distributed through to Google Forms to members of the Indian Speech and Hearing Association and faculty of teaching institutions. The forms were also delivered to participants via various social media platforms such as Instagram and WhatsApp, and with e-mail.

The survey remained open for a period of 6 months June 2021 to December 2021.

Stage 3: Analysis of the Responses from the Questionnaire

The responses were analysed using MS Excel 2019. The responses were downloaded, missing responses were deleted and numbers and percentage calculated.

Using the IBM SPSS version 20 software, the acquired data were statistically analyzed. Percentage of responses were computed and results presented.

Results

There were a total of 42 questions which included demographic details extraction and also questions related to dysphagia. The first nine questions were to obtain relevant demographic details from the respondents. These details included age, gender, place of work, location of work, email address, and whether they were involved in dysphagia practice. If the answer was yes, then the Google sheet guided the participant to a few sets of questions about the practice of dysphagia. If the

answer was no, the Google sheet directed participant to questions 10 to 15 to understand the attitude of SLPs toward the practice of tele-assessment. Questions 16 to 18 obtained information on the practice of SLPs in dysphagia assessment and therapy. Questions 19 to 21 aimed at understanding the influence of lockdown on dysphagia assessment and management. Questions 22 to 40 were to understand the protocol or the process of tele-assessment of dysphagia that the SLPs practiced as well as to understand the challenges that they faced during the assessment. Questions 41 and 42 were to understand their opinion on continuing telemode assessment of dysphagia.

Demographic and Job Status

In total, 121 SLPs participated in the present study, of which eight responses were incomplete, and hence rejected. Of the 113 responses, 23.89% (n=27) were male and 76.10% (n=86) were female speech-language pathologists. Of these, 73.45% (n=83) were working as full-time speech-language pathologists and 26.54% (n=30) were working as part-time speech-language pathologists. Distribution of participants was as follows- 40.7% (n=46) worked in institutional setups, 28.3% (n=32) in private hospitals, 22.12% (n=25) in private clinical setups, 6.19% (n=7) in government hospitals and 2.65% (n=3) worked in special schools. Among the working professionals, the majority (89.38%; n=101) were in urban sets up and the remaining were in rural (5.3%; n=6) and semi-urban (5.3%; n=6) setups.

Clinical experience with dysphagia before and during lockdown due to the COVID-19 pandemic

The second section of the questionnaire pertained to the clinical experience in handling patients with dysphagia. Among the participants who responded, 56.63% (n=64) were involved in the assessment and treatment of individuals with dysphagia. A large number of clinicians did not work with deglutition disorders (43.36%, n=49).

Attitude to tele-assessment : OPME: Of the 49 SLPs not working with the dysphagia, 77.5 % (n= 38) carried out OPME during teleassessment and 22.4 % (n= 11) SLPs did not. (Q10, Q11): Slightly more than half of SLPs n=26 (53%) reported no problems in conducting OPME whereas 23 SLPs (46.9%) faced problems while conducting OPME.

Among the 49 SLPs, 10.4 % of SLPs (n=5) reported that online evaluation of dysphagia was efficient, 52.1% of SLPs (n=25) reported that it was not efficient and safe, and 38.7% of SLPs (n=19) reported they did not know if it was efficient and safe (Q12).

With respect to time consumption in assessment, 51% (n=25) reported that the telemode of dysphagia assessment was time-consuming and 10.2% (n=5) reported otherwise (Q13). A fairly large number 38.8% (n=19) reported that they did not know.

The participants were almost equally divided in the responses to recommend tele-assessment or tele-therapy for dysphagia. Among the 49 SLP participants, 17 SLPs (34.7%) reported that they did not recommend teleassessment or teletherapy of dysphagia to their colleagues/peers, 15 SLPs (30.6 %) reported that they recommended it, and

17 SLPs (34.7 %) reported that they were not sure (Q.14).

The opinion with respect to the usefulness of tele dysphagia treatment was evaluated. Among the 49 SLPs who did not carry out dysphagia treatment, 22 SLPs (44.9%) reported that tele dysphagia treatment was useful and valuable in the Indian scenario, 15 SLPs (30.6%) reported that it was very helpful, and 10 SLPs (20.4%) reported that it was moderately helpful. Two SLPs felt that it is slightly helpful (4.1%) (Q15).

Experience of SLPs working with dysphagia

The majority of the SLPs who participated in the study, i.e. 43.7% (n=28) of SLPs had more than 4 years of experience with dysphagia, 14% (n= 9) had 3-4 years of experience with dysphagia, and a minimum population (9.37%; n=6) had 2-3 years of experience with dysphagia (Q17).

The number of SLPs who had 1-2 years of experience comprised 17.18% (n=11) and 15.62% (n=10) of SLPs had less than 1 year of experience in dysphagia.

Pre-pandemic exposure: The type of dysphagia in patients seen by SLPs are represented in Figure 1. Participants could select many options in the answer (Q16).

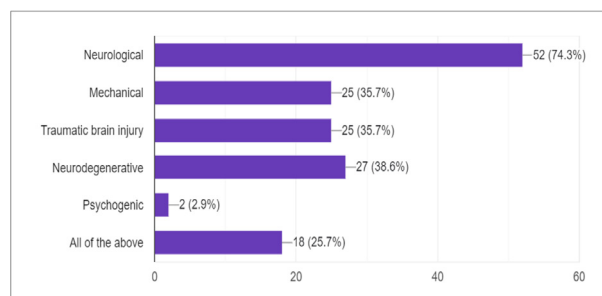


Figure 1: Types of dysphagia in patients seen by SLPs in India before the lockdown due to COVID-19

In the period before the pandemic, the participants had exposure to a wide variety of patients, though those with neurological causes predominated.

Clinical experience during the lockdown: Types of dysphagia. The type of dysphagia seen by the SLPs handling dysphagia patients is represented in Figure 2. Participants could select all options that applied in answer to the question on types of

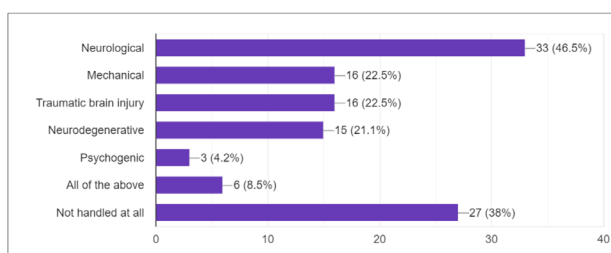


Figure 2: Types of dysphagia in patients seen by SLPs in India during lockdown due to COVID-19

dysphagia patients seen (Q18). A change was seen in the number of SLPs handling patients with dysphagia. During the lockdown of COVID-19, 38% (n=27) of the participants reported that they did not handle patients with dysphagia (Q19). However, the trend in type of patients seen appears to be similar to the pre-COVID-19 period.

Post lockdown, 75% of SLPs (n=48) continued handling individuals with dysphagia, and 25% (n=16) of SLPs did not continue to handle individuals with dysphagia (Q20).

Among the SLPs, 29.6% (n=19) started seeing dysphagia patients offline, 21.8% (n=14) continued assessing dysphagia patients in online mode and 42.2% (n=27) started seeing patients in hybrid mode (Q21). In four SLPs, (6.25%; n=4) the question was not applicable.

Age of the patients seen by participants varied. Among the 64 SLPs practicing, 31 SLPs (48.4%) had seen dysphagia mainly in adults, 5 SLPs (7.81%) handled dysphagia in pediatric population, and 28 SLPs (43.7%) had seen dysphagia in both children and adults (Q16). Thus, in handling dysphagia, there was only a few, (n=5) who had seen dysphagia only in pediatric population during their telepractice.

Practice of assessment by SLPs

A majority of the SLPs (93.75 %; n=60) reported that they explain the advantages and drawbacks of online evaluation before the initiation of tele-assessment or treatment and 6.25 % (n=4) reported that they did not explain the same (Q 22). Participants had preferences with respect to the food consistency and amount used during therapy (Q23).

Food Consistency: It was observed that 89% (n=57) of SLPs suggest all consistencies of food for assessment of swallowing, and few (10.9%; n=7) reported that they did not suggest different consistencies of food for teledysphagia assessment (Q24). The consistency of food preferred by SLPs for teleassessment of swallowing is depicted in Figure 3.

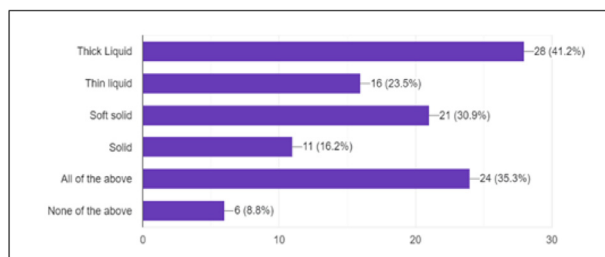


Figure 3: Soft food consistency suggested by SLPs for teleassessment of swallowing

Volume of food/liquid preferred for assessment: The amount of liquid suggested for use by SLPs is represented in Figure 4. The most

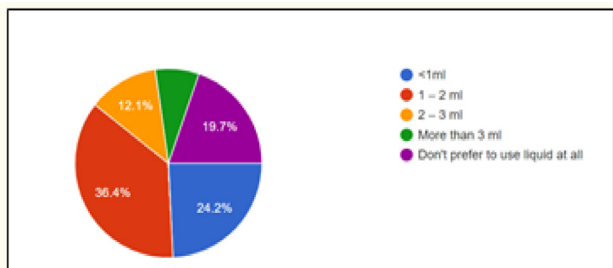


Figure 4: Amount of liquid suggested by SLPs for teleassessment of swallowing.

number prefer to use very small volumes or not at all(Q25). Thirty eight SLPs recommended the use of 0-1ml of water of which 21.8% (n=14), used than 1ml, 37.5% (n=24) suggest 1-2ml, 12.5%, (n=8) suggest 2-3 ml, 7.8% (n=5) suggest more than 3 ml, 20.3% (n=13) preferred not to use liquid at all.

Figure 5 indicates the number of SLPs and the amount of soft solids they preferred for teleassessment of swallowing (Q26).

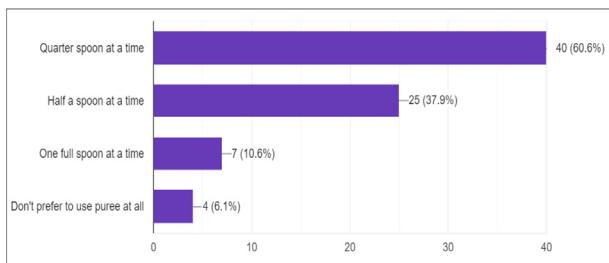


Figure 5: Amount of soft food consistency suggested by SLPs for teleassessment of swallowing

The amount of solid food recommended by SLPs for teleassessment of swallowing is represented in grams in Figure 6 (Q27).

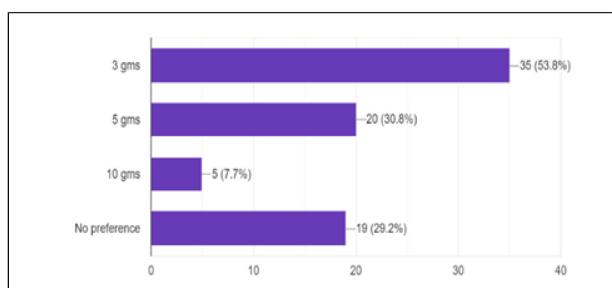


Figure 6: Amount of solid food in grams preferred by SLPs for teleassessment of swallowing

Challenges faced

The final section of the survey questionnaire included participants to answer the challenges during the tele-assessment of dysphagia (Q28). Challenges in tele-therapy for dysphagia were many varying from technical to related co-morbidities.

The major challenge reported by the majority of the SLPs (40.6%, n=26) was issues with the speed of the internet. Fortyfive point three percent (n=29) reported difficulties with positioning of the patient as a challenge, 20.3% (n=13) reported difficulty gaining support from family members, and 29.7% (n=19) reported preparing different consistency as a barrier in tele-assessment. In addition, 42.2% (n=27) of the participants reported inability to carry out the necessary informal assessment as a deficit of teleassessment. Patient-related challenges were reported by some of the SLPs. About a third, 32.8% (n=21) reported convincing and adapting the patient for tele-assessment and telemanagement as a challenge while 23.4% (n=15) reported understanding of dysphagia by the caregivers as a challenge. Only 12.5% (n = 8) of the SLPs did not report any challenges.

During teleassessment, 81.25 % of SLPs (n=52) reported that they perform OPME during teleassessment whereas 18.75% of SLPs (n=12) reported that they don't perform OPME during tele-assessment (Q29). During tele-assessment, 75% of SLPs (n=48) reported that they faced problems while performing OPME during tele-assessment and 25% of SLPs (n=16) reported that they didn't face problems while performing OPME in tele dysphagia assessment (Q30).

Among the problems faced while performing OPME (Q31), 4.6% of SLPs (n=3) reported the need for repeated instructions as a major challenge, 35.9 % of SLPs (n=23) reported not being able to visualize structures as a major problem, and 6.25% of SLPs (n=4) reported none of these as problems. A minimum number of three (4.6%) SLPs reported improper positioning of patients as a problem, one (1.5%) reported of difficulty in following instructions as a challenge, and n=30 (46.8%) said all of the listed problems. These issues have been reported previously.

When probed regarding patients with comorbid conditions or complex medical requirements, the responses were as follows. Teleassessment of dysphagia in an individual with hearing impairment was considered very challenging by 53.1% of SLPs (n=34) and 46.8% of SLPs (n=30) reported it as challenging (Q32).

Among the SLPs, 53.1.8% (n=34) and 40.6% (n=26) reported teleassessment of dysphagia in individuals with tracheostomy as very challenging and challenging respectively. Only 6.2% of SLPs (n=4) felt that the teleassessment of individuals with a tracheostomy was easy (Q33).

While performing teleassessment of dysphagia in patients with nil per mouth condition, 69% of SLPs (n=46) reported it as a trouble and 28.1 % SLPs (n=18) reported it not as a trouble (Q34).

Regarding observation of oral residue post-swallow during teleassessment (Q35), 57.8 % of SLPs (n=37) reported that they were not able to observe oral residue, whereas 42% of SLPs (n=27) reported that they were able to observe oral residue. Concerning visualization of anterior spillage (Q36),

60.9% of SLPs (n=39) reported that they were able to visualize the anterior spillage, but 39 % (n=25) reported that they were not able to visualize the anterior spillage. Among the SLPs who participated in the study, 62.5% of SLPs (n=40) reported trouble in judging wet/gurgly voice post-swallow during tele-assessment, and 37.5% of SLPs (n=24) reported no trouble in the same (Q37).

SLPs reported that during teleassessment 59.37% SLPs (n=38) were able to identify aspiration and 40.6% SLPs (n = 26) could not identify aspiration (Q38). Among the SLPs who participated in the study, 59.37% SLPs (n=38) felt that online evaluation of dysphagia was efficient and safe (Q39), 37.5% SLPs (n=24) felt that it was not efficient and a minimal 3.12% (n=2) felt that it was very efficient. Regarding time consumption (Q40), 75% (n=48) felt that assessing an individual with dysphagia through telemode was time-consuming, 10.9% (n=7) felt that it was not time-consuming, and 14.06% (n=9) felt that they don't know about the same.

The participants reported that 39.06% (n=25) would recommend their colleagues to take up tele-assessment and teletherapy in dysphagia, 37.5% (n=24) reported that they would not recommend tele assessment and tele-therapy in dysphagia to their colleagues, and 23.4 % (n=15) were uncertain regarding the recommendation (Q41).

The majority of the SLPs considered tele-assessment of dysphagia to be valuable and useful. 37.5% (n=24) reported it as “extremely helpful”, 37.5% of SLPs (n=24) found it to be “very helpful”, while 21.8% (n=14) reported teleassessment as “moderately helpful”. Very few participants, (3.12%; n=2) reported it as “slightly helpful” (Q42).

Discussion

From the current study results we see that the majority of SLPs practicing therapy for dysphagia were females (76%) and 24% were males. This could be because in India, the main gender seen in educational institutions for speech and hearing courses are females. This indicates the need to encourage males also to come forward towards the profession. The number of SLPs practicing dysphagia treatment was a little over half of the respondents. Another interesting finding was that most of the participants were working as full-time SLPs, 25 in hospitals and 16 in institutions which indicates dysphagia practice in India is vastly seen as a full-time job rather than part-time practice. Dysphagia, the condition itself requires full-time attention during the period of its assessment and management. This can be the reason why the majority of SLPs working in dysphagia are involved in it as a full-time job. Though dysphagia is a condition that needs to be identified and treated in hospitals, the present study indicates a dearth of practicing SLPs in hospitals. Only 39% of the total participants were practicing in hospital setups. This indicates that there is a need to increase the position of SLPs working in hospitals so that there will be more hands to increase the service for dysphagia and treatment at hospitals. Another reason for the dearth of practice in SLPs in hospital setups in rural areas could be due to the reduced salary, and other issues such as stay, traveling, reduced case load/support being offered, compared to an urban setup.

The type of dysphagia that was addressed mainly by the participants was neurogenic in origin. This could be because of the increased incidence of stroke and bed dependency that this population goes through or the knowledge of doctors who refer them. This indicates that more SLPs should be

trained in neurogenic dysphagia. The number of SLPs who practice with dysphagia following mechanical and traumatic brain injury is few. there is a need to build on the training of SLPs to increase their skills to deal with mechanical dysphagia.

Considering the practice of SLPs with dysphagia, COVID-19 saw an increase in the participation of SLPs with dysphagia patients. The number of SLPs practicing teletherapy with dysphagia patients was limited and this increased after the lockdown due to the COVID-19 pandemic. The possibility of spreading COVID-19 due to exposure to secretions while dealing with patients having dysphagia one on one is inevitable. Teletherapy reduces the risk of infection spread and hence might be more popular.

From the observation of the challenges that were faced by SLPs, it was clear that internet issues were most troublesome for the majority of SLPs. The variations in the strength of network connectivity in different areas of the country can be another reason for hindrance in performing teleassessment and rehabilitation in these areas. Similar information on connectivity has been provided by Tar-Mahomed & Kater (2022), and Ward et al. (2009). This connectivity issue would have made visualizing of OPME structures challenging leading to a lesser number of OPME assessments through telemode. This has also led to the opinion of less efficiency and safety of tele evaluation of dysphagia by the some of the SLPs who participated in the study.

Difficulties in carrying out oral cavity examinations are identified as the major challenge in teleassessment as per our participant reports. Around 37.5% of SLPs reported that they don't perform OPME online due to problems while conducting the assessment. Another challenge faced

by SLPs while performing online assessments was that they felt it was time-consuming. The majority of SLPs felt that the online evaluation of dysphagia was not efficient. A larger number, 37.5% (n=24) of SLPs also reported that they would not recommend the practice of teleassessment in dysphagia to their colleagues.

Since there are no standard guidelines available, the SLPs used the approach with the least risk of aspiration or other untoward occurrences during assessment or therapy. With respect to the quantity of the food, the majority suggested a minimal amount of intake of liquids, semisolids, and solids. The challenges were based on the execution of assessment, the majority of SLPs reported that the internet speed was a challenge, and positioning patients correctly for assessment was also a challenge. Similar information on connectivity has been provided by Tar-Mahomed & Kater (2022), Lalor et al. (2000). Another challenge was less support from the family of the patient.

Among the SLPs providing therapy for dysphagia, the number of SLPs performing OPME was greater than the ones who were not performing. The SLPs performing OPME felt that the major challenge in performing OPME was the need to provide repeated instructions. Another difficulty was in positioning the patient to visualize structures. An associated condition of hearing impairment and the presence of tracheostomy in patients with dysphagia was found as most challenging situation to handle patients online. The majority of SLPs did not suggest tele-assessment for patients with nil per mouth condition.

Oral food residue in the anterior region of the oral cavity was more easily noticeable. Anterior spillage was more noticeable than posterior spillage

by the majority of SLPs during teleassessment. The majority of SLPs (62%, n=40) had difficulty in judging the presence of a gurgly quality of voice after swallowing. However, the majority could identify the occurrence of aspiration through a cough produced by the patient immediately after swallowing.

When the provision of SLP assessing and managing dysphagia gets restricted, the possibility of performing online mode is the least that the patient can achieve. The number of SLPs who did not recommend teleassessment was almost equal to the number who did, which could be because of the challenges that they have faced, although many felt that online assessment was useful (Q42). The issues with visibility challenges due to the lack of clarity provided by connectivity issues in different regions that the patients resided in can also make it hard to perform a reliable dysphagia assessment online.

The lack of home nurses or home care aides at the end of service delivery of the patient can make the patients hesitant to participate in the online assessment. Thus, convincing the patient's family and positioning the patient during the online assessment poses a larger challenge.

Another observation from the study was that the proper oral trials with different food consistencies could not be done effectively using a telemode of assessment. A large number of the SLPs suggested reduced the volume of food/liquid in food trials which reduced the efficiency in identifying the swallowing mechanism properly. The co-occurring hindrance was that the patient could not understand and participate completely when he/she had a hearing impairment or was on tracheostomy. The possibility of managing teleassessment with tracheostomy received very minimal positive response from SLPs.

Toward the end of the questionnaire, the majority of SLPs had a positive opinion of the effectiveness and usefulness of teleassessment with 75% (n=48) responding it was helpful and very helpful, similar to the work presented by Borders et al. (2021).

The limitation of the study was that there were no questions regarding the availability of trained caretakers at home, and questions on the mode of internet and broadband connections were not asked.

Conclusion

The present study indicates the impact of the COVID-19 pandemic on the dysphagia service delivery by SLPs. The majority of challenges were concerning not having a specific protocol for the tele-assessment of dysphagia. Another major challenge was the inefficiency of internet connectivity. The clarity issues of poor internet connectivity are reflected in the responses of SLPs during tele-assessment. The lack of OPME-based observations itself reduces the food trials with patients. This whole process creates a hindrance in understanding the swallowing mechanism of the individual with dysphagia.

This study indicates the need to create awareness and train an assistant or family members to perform a teleassessment. This could have helped in convincing the family members and early detection of dysphagia in individuals who were bound to intensive care at home. There is also a need to set a protocol for performing telemode of dysphagia assessment which provides clear guidelines on providing the tele services to individuals with dysphagia.

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Appendix.

Dysphagia tele assessment challenges faced by speech Language pathologists in India- Questionnaire

* Indicates required question

1. Name *
2. Age in years *
3. Gender * *Mark only one option.*
a) Male b) Female
4. E Mail id *

Working status

5. Are you currently working * *Mark only one option.*
a) Yes b) No
6. If working * *Mark only one option*
a) Full time b) Part time
7. Place of work * *Mark only one option.*
a) Institution b) Government Hospital
c) Private Hospital d) Own private clinic
e) Special school
8. Location * *Mark only one option*
a) Urban b) Rural c) Semi Urban

Clinical Experience in dysphagia

9. Do you assess or provide treatment for an individual with dysphagia ? *Mark only one option.*- Yes/No
If Yes , Skip to question 16
If No, Skip to question 10

Teleassessment

10. Have you done Oral Peripheral Mechanism Examination during the teleassessment? *Mark only one option.*
a) Yes b) No
11. Have you faced problems while conducting the Oral Peripheral Mechanism Examination? *Mark only one option.*
a) Yes b) No
12. Do you think the online evaluation of dysphagia is efficient and safe ? *Mark only one option.*
a) Yes b) No c) Don't know
13. Is it time consuming to assess individuals with dysphagia via tele mode? *Mark only one option.*
a) Yes b) No c) Don't know
14. Do you recommend your colleges/peers to take up teleassessment/tele therapy in Dysphagia. *Mark only one option.*
a) Yes b) No c) Don't know
15. According to you how useful or valuable is treatment of dysphagia in the Indian scenario ? *Mark only one option.*
a) Extremely helpful b) Very helpful
c) Moderately helpful d) Slightly helpful
e) Not at all helpful

Clinical Experience in Dysphagia

16. Kind of population you have been handling for Dysphagia assessment/treatment. *Mark only one option.*
a) Pediatric b) Adult c) Both

17. How many years of experience do you have in the assessment and treatment of individual with dysphagia? *Mark only one option*
- < 1 year
 - 1 – 2 years
 - 2-3 years
 - 3-4 years
 - > 4 years
18. What type of individual with dysphagia did you assess or treat prior to COVID 19? If required, please select more than one. *Check all that apply.*
- Neurological
 - Mechanical
 - Traumatic brain injury
 - Neurodegenerative
 - Psychogenic
 - All of the above
19. What type of an individual with dysphagia did you handle during the lock-down of COVID 19? If required, please select more than one. *Check all that apply.*
- Neurological
 - Mechanical
 - Traumatic brain injury
 - Neurodegenerative
 - Psychogenic
 - All of the above
 - Not handled at all
20. Have you continued to assess or treat an individual with dysphagia post lockdown? *Mark only one option*
- Yes
 - No
21. Mode of assessment/intervention to an individual with Dysphagia post lockdown. *Mark only one option*
- Online
 - Offline
 - Both
22. Do you explain to an individual with dysphagia about the advantages and drawbacks of online evaluation prior to the initiation of tele assessment or treatment? *Mark only one option.*
- Yes
 - No
- Food Texture and Diagnosis of Dysphagia**
23. Do you suggest different consistencies of food to evaluate the swallowing process during tele dysphagia evaluation? *Mark only one option.*
- Yes
 - No
24. What kind of food consistencies do you suggest, to assess swallowing function during tele dysphagia evaluation? If required, please select more than one. *Check all that apply.*
- Thick Liquid
 - Thin liquid
 - Soft solid
 - Solid
 - All of the above
 - None of the above
25. During the teleassessment of an individual with dysphagia, what volume of liquid do you advise them to take? *Mark only one option.*
- <1ml
 - 1 – 2 ml
 - 2 – 3 ml
 - More than 3 ml
 - Don't prefer to use liquid at all

26. What quantity of soft/ thickened soft solid do you advise to an individual with dysphagia to take during tele-evaluation? If required, please select more than one *Check all that apply*.
- Quarter spoon at a time
 - Half a spoon at a time
 - One full spoon at a time
 - Don't prefer to use puree at all
27. What amount of solid do you suggest during teleassessment to the patients to take? If required, please select more than one. *Check all that apply*.
- 3 gms
 - 5 gms
 - 10 gms
 - No preference
- Challenges in assessment**
28. During the online examination of an individual with dysphagia, have you faced any of the following problems? Please if needed, select tick more than one. *Check all that apply*.
- Speed of internet
 - The positioning of the patient
 - Support from family members
 - Preparing different consistency of food,
 - Inability to carry out the necessary informal assessment
 - Convincing and adapting the patient for teleassessment and management,
 - Understanding of dysphagia by the caregivers,
 - All of the above
 - None of the above
29. Have you done Oral Peripheral Mechanism Examination during the tele- assessment? *Mark only one option*.
- Yes
 - No
30. Have you faced problems while conducting the Oral Peripheral Mechanism Examination? *Mark only one option*.
- Yes
 - No
31. Have you faced problems while conducting the Oral Peripheral Mechanism Examination? *Mark only one option*.
- Repeated instructions
 - Difficulty in following instructions
 - Cannot visualize the structures properly
 - Improper positioning of the patient
 - None of the above
 - All of the above
32. Do you think teleassessment dysphagia in an individual with hearing impairment challenging? *Mark only one option*.
- Very challenging
 - Challenging
 - Easy
33. Do you think tele– assessment of Dysphagia in an individual with tracheostomy challenging? *Mark only one option*.
- Very challenging
 - Challenging
 - Easy
34. Have you had trouble doing teleassessment of Dysphagia among nil-per-mouth patients? *Mark only one option*
- Yes
 - No
35. Were you able to observe oral residue post swallow during tele assessment? *Mark only one option*
- Yes
 - No

36. Were you able to visualize anterior spillage?

Mark only one option.

- a) Yes b) No

37. Do you have trouble judging throat clearing, wet/gurgly post swallow? *Mark only one option.*

- a) Yes b) No

38. In the teleassessment of dysphagia, are you able to identify aspiration? *Mark only one option*

- a) Yes b) No

39. Do you think the online evaluation of dysphagia is efficient and safe ? *Mark only one option.*

- a) Very efficient
b) May be
c) Not efficient

40. Is it time consuming to assess an individual with dysphagia via tele mode? *Mark only one option*

- a) Yes b) No c) Don't know

41. Do you recommend your colleges/peers to take up teleassessment/teletherapy in Dysphagia. *Mark only one option.*

- a) Yes b) No c) Don't know

42. According to you how useful or valuable is treatment of dysphagia in the Indian scenerio ? *Mark only one option.*

- a) Extremely helpful
b) Very helpful
c) Moderately helpful
d) Slightly helpful
e) Not at all helpful

* * *

A Multidisciplinary Approach to Managing Swallowing Dysfunction in Older Adults

Pere Clave & Omar Ortega (Eds)

ISBN 978-0-323-91686-8

Academic Press, United Kingdom

April 2024

Available as Paper Back on Amazon.in : Rs. 16,157.00

Reviewed by Manaswini D.

This book has come forth in a much-needed time frame, with resources that explore the complex issue of dysphagia in the older adult population with a collaborative edge. It puts forth a detailed examination of how various healthcare disciplines should work together to enhance the quality of life for older adults with swallowing difficulties. The book has 10 chapters with the inclusive subchapters, structured to provide a thorough understanding of both the theoretical and practical aspects of managing swallowing dysfunction. Seventy one professionals of various disciplines across four continents have contributed to these chapters.

It begins with a foundational overview of dysphagia, outlining its prevalence, causes, and impact on older adults, rooting for oropharyngeal dysphagia to be globally considered under “the geriatric syndrome” umbrella. This has chapters (Chapter 1, 2 and 3) devoted to brain structures which indulge readers on neural basis for swallow and the corresponding age and disease related changes in central swallow control, with excellent images depicting the difference typical versus dysphagic brain, which unfortunately, has limited visual representations in literature. Chapter 4 deals with the pathophysiology of sarcopenia, clinical signs and the terrifying cycle in the relationship between dysphagia, malnutrition, and sarcopenia in older adults. The 5th chapter of the book deals with the diagnosis of dysphagia. It puts forth the non-

instrumental as well as instrumental assessment, directly evaluates the swallow function from an SLP’s perspective, and moves on to introduce the novel techniques such as using neuro-imaging as well as neurophysiological studies. The 6th chapter delves into the care of older patients with swallow dysfunction complications such as dehydration, malnutrition, oral health, respiratory complications, institutionalization and quality of life, providing a much-needed wholistic perspective to students and unversed professionals alike. The 7th chapter deals with treatment, food texture modifications, the role of multidisciplinary team for reversing dysphagia, including a subchapter dealing with SLP’s classical rehabilitation strategies. It also presents the pharmacological treatments of which most SLPs have limited understanding; and some recent trends such as transcutaneous electrical stimulation. The subsection on pharmacology, has information on the effect of chemical and physical stimulation on the biomechanics and neurophysiology of swallowing. It explains on the specialized structures and receptors that are involved in the sensory perception. While this subchapter labels itself as pharmacological treatment it actually says about using simple day-to-day chemical agents such as lemon juice, black pepper oil or capsaicin (extracted from red chilli) for swallow treatment. Chapter 8 deals with poststroke oropharyngeal dysphagia and its complication, primarily the malnutrition and respiratory infections and resultant economic

burden. The penultimate 9th chapter is regarding the scientific societies in the world researching on oropharyngeal dysphagia their origin mission and their brief history showcasing present progress. The final 10th chapter provides a neat summary and conclusion of the entire book, for a quick recap.

Each chapter is authored by experts in the respective fields of various continents, ensuring that the information presented is both authoritative, relevant, and globally inclusive. With a stance for a collaborative rehabilitative model, the book emphasizes the importance of teamwork and communication among healthcare providers. The book illustrates through case studies and practical examples how integrating various perspectives can lead to more effective management strategies.

One of the book's greatest strengths is its emphasis on the integration of different disciplines in managing dysphagia. By highlighting how speech-language pathologists, dietitians, dentists and other professionals can collaborate, the book provides a wholistic view of patient care that goes beyond traditional, siloed approaches. The book is rich in evidence-based practices, drawing on current research to support its recommendations. This evidence-based approach ensures that readers are equipped with the most up-to-date and effective strategies for managing swallowing dysfunction. The book comes with case studies and examples, which makes it highly relatable to clinical routine, helping smooth application of theory knowledge to practical application. It also highlight's the importance of customizing rehabilitation, emphasizing its need to cater towards individual needs and preferences of older adults. Due to its multidisciplinary nature

particular for treatment, it may require SLP readers to have some prior knowledge of related fields of medicine. Nonetheless, this offers a thorough background for medical SLPs with the complications of OD, in-depth understanding to nutrition and texture modifications, detailed rheology for us SLPs which is often missed in standard teaching and gives the clinician a better understanding of the issues faced by a person with dysphagia and the family. This book, however, cannot be a "go-to book" to SLPs for comprehensive understanding of swallowing therapy techniques. The book includes cultural diversity during assessment and treatment in settings, but not in nascent set up such as ours, in India. Though the writing style of this book varies, considering that the contributors are primarily non-native English speakers, the vibrant visual illustrations with picture, graphs, flowcharts and inclusions of information in tabular form makes reading interesting and easily comprehensible. The book's extensive reference makes another bonus point. The book is available as a soft bound version (personally not a fan of soft bound versions). Interestingly, this book's digital version is available in ScienceDirect and has a reflowable layout by Bookshelf. It is probable that some of the figures are clearer in the digital mode. *A Multidisciplinary Approach to Managing Swallowing Dysfunction in Older Adults* is an essential resource for all healthcare professionals involved in the care of older adults with dysphagia, as it aims to fill the gap on older individuals' suffering from oropharyngeal dysphagia. It is a must-read for anyone looking to enhance their practice and improve patient care through a collaborative and comprehensive approach.

* * *



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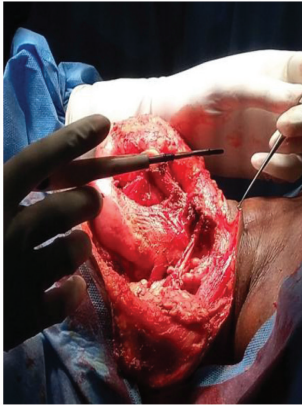
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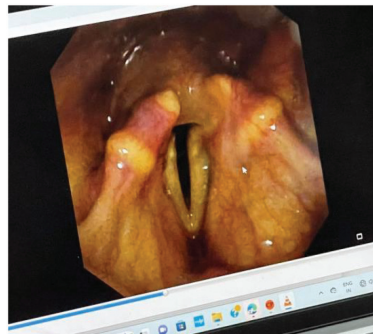
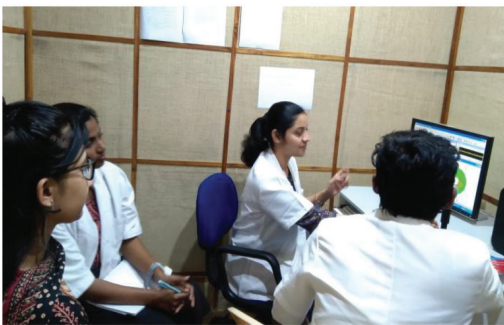
E mail :college.srcish@gmail.com

About the Fellowship

The fellowship program is for 5 months, and it aims to provide clinical training in speech and swallowing rehabilitation for Head and Neck cancer patients by giving equal importance to the theory concepts.

The program includes 1-month of clinical postings at Kidwai Memorial Institute of Oncology, Bengaluru and 1-month of postings at Narayana Hrudayalaya Hospital, Bengaluru.

The 3-month postings at our Institute will include course work taught by multidisciplinary team such as surgeons, nurses, speech and swallow therapists, radiologist, nutritionist, dietician, physiotherapist and social worker.



Highlights



Observation of Head and Neck cancer surgeries, OPD consultations supervised by Head and Neck Surgeons

Theoretical teaching and rehabilitation of Head and Neck cancer patients

Well equipped Dysphagia Unit at Dr. SRCISH

Hands on speech and swallowing assessment and management in Head and Neck cancer patients

Demonstration and Hands-on-training in Neuromuscular Electrical Stimulation, Voice prosthesis, Tracheostomy Tubes, Fiberoptic Endoscopic Evaluation of Swallowing under the supervision of well experienced ENT doctors etc



Chairman & Director
Lion V V Krishna Reddy

Treasurer
Lion V S Shanthvadhan

Secretary
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Guidelines for authors

Manuscripts should be submitted in word file-.doc/.docx. and references should follow the APA 7 format.

Title page should be separate with authors names, affiliations, and corresponding author details should be included.

Abstracts: Structured abstract with Background and Purpose, Methods, Results, and Conclusion. Abstract should be less than 300 words excluding references. Sufficient details in the abstract to be provided with respect to participants, testing, and procedure.

Keywords: Five to seven key words should be listed end of the abstract.

Short running title of less than 50 characters should be included.

Main manuscript

Introduction should lead to the need of the study and aims. Methods section must include study design, details of participants, materials used, rationale, procedure, and statistical analysis. Titles for figures and text must be clear and self-explanatory, providing information as a stand-alone structure. Stand-alone, high-quality figures and tables should be included in results section. Discussion section should provide understanding of results with support from literature. The manuscript should end with conclusion that brings out implication of the study.

All manuscripts should include acknowledgements, conflict of interest statement, ethical approval statement, participant consent statement, and funding statement at the end of the article.

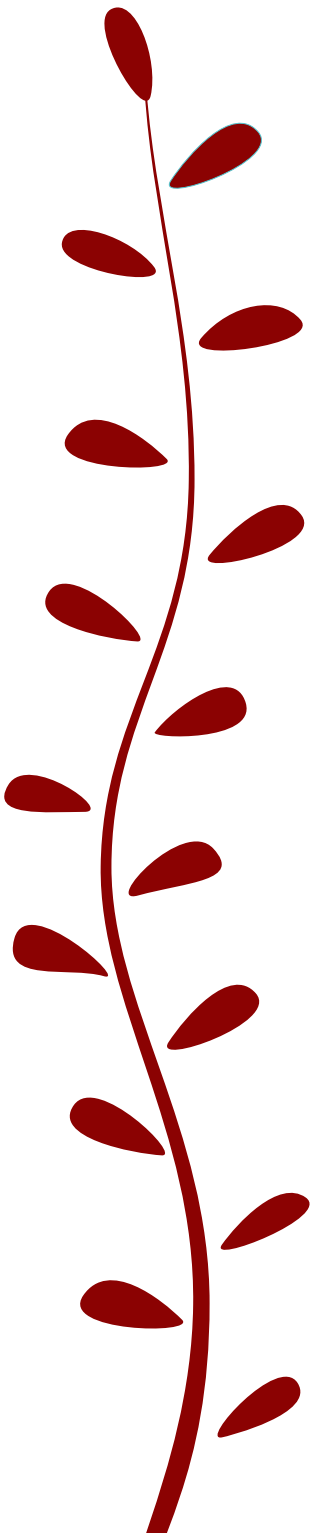
Resolution for figures JPEG/PNG should be a minimum of 300 DPI. It is preferred that all content be original. If figures are taken from another source, the author(s) is/are responsible for taking the permission/paying from the authors of the figure.

Ethical approval of the study and informed consent should be mentioned at the time of submission. Figures that include identifiable information about participants need to have an informed consent that is provided by the author.

Spacing- Double spaced with continuous line numbers. Single spaces after the period. Page numbers should be provided.

Articles are peer reviewed. Authors are encouraged to suggest reviewers, though the final decision is made by the editorial board.

All effort will be made to review the articles within 4 weeks.



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English Half Yearly
January to June 2024

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