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## ROLE OF SPEECH LANGUAGE PATHOLOGIST IN ASSESSMENT AND MANAGEMENT OF DYSPHAGIA- PERSPECTIVE FROM A DEVELOPING COUNTRY

### ABSTRACT

#### Objective:

The aim of the study is to find out the current level of awareness regarding the role of speech language pathologist in assessment and management of dysphagia among the medical professionals.

#### Materials and methods:

A total of 106 professionals from the different part of Nepal completed a purpose built questionnaire regarding participant's levels of awareness of dysphagia and speech language pathologist's role in dysphagia management. For the professionals who were at the larger distant survey monkey was used to obtain response digitally.

#### Results:

Responses were obtained from diverse professionals as nurses, doctors, specialist doctors, physiotherapist, dietician etc. The result indicated that only 10.58% of respondents followed protocol for dysphagia assessment and management. Most professionals (89.42%) lacked any form of training related to dysphagia, it was found that knowledge and awareness regarding management of dysphagia among various medical professional was poor; leading to lack of referral.

#### Conclusion:

The present study highlights the need for awareness of different professionals in the management of dysphagia in collaboration with speech language pathologist. This gives the clear cut picture of the barriers which need to be addressed in future while dealing with multidisciplinary professionals involved in dysphagia.

**Key words:** Dysphagia, Management, Speech Language Pathologist

## INTRODUCTION

Swallowing is a reflexive behavior that normal healthy individuals carry out at least 1000 times a day effortlessly<sup>1</sup>, which is fundamental to nourishment and hydration of body and also is central to recreation through social events and gathering.<sup>2</sup> Difficulty in swallowing is termed as Dysphagia<sup>3</sup> which can result in penetration or aspiration of airway. Penetration is when "food enters the airway but not below true vocal folds" and while aspiration is "passage of material below true vocal fold and into trachea".<sup>4</sup> Subglottic penetration of food without elicitation of cough reflex is termed as silent aspiration.<sup>5</sup> Dysphagia has been reported as a common symptom of many medical conditions.<sup>6</sup>

Prevalence and incidence of dysphagia is not well

established due to varied studies approach and methods. Prevalence of dysphagia depends on age, cause of dysphagia and method used to assess for dysphagia.<sup>7</sup> Incidence of dysphagia is reported at 78% following stroke<sup>7</sup>, 32% in Parkinson's disease<sup>8</sup>, 31.3% in multiple sclerosis<sup>9</sup>. In cases with COPD (Chronic obstructive pulmonary disease), it has been reported to be around 27%, which may be due to poor coordination in respiration and swallowing.<sup>10</sup> Various studies have reported dysphagia to affect up to 50% of stroke case and 60% of cases in acute care.<sup>11</sup> In context of Asia, prevalence of dysphagia in South Korean was reported to be 52.7% in nursing home residents<sup>12</sup> and was reported to be 51.0% in long term care stay in Taiwanese population<sup>13</sup>. A study in Malaysia indicated that that only few individual

with dysphagia received treatment from SLP, for which it was found that 50% of SLP in Malaysia did not manage dysphagia and out of which 41% reported lack of referral as a reason.<sup>6</sup>

Sharma and colleagues reported that there was poor understanding of professionals involved in dysphagia management as well as the roles of SLPs in managing the patient with dysphagia in Malaysia.<sup>14</sup> This finding was further emphasized by Mustaffa who reported a lack of cooperation and support from other hospital staff with regard to dysphagia management.<sup>6</sup>

Dysphagia can result in varied outcomes and consequences as dehydration, weight loss, pneumonia, more time in wards and poor rehabilitative outcomes.<sup>15-17</sup> Hence it is crucial that appropriate management for dysphagia is achieved, which is based on the proper diagnosis and team work among professionals. This is best achieved with Multi-Disciplinary Team (MDT) approach. To ensure that dysphagia is properly managed, input from multiple professionals are required including Speech-Language Pathologist, ENT surgeon, General physician, Nurses, Occupational therapist, Physiotherapists, Nutritionist and Dieticians to name few. Speech Language Pathologist has a specific role in the MDT, which has responsibility of rehabilitation of voice, speech and swallowing to suit each individual's lifestyle and preferences. Assessment can range from bedside evaluation to diagnostics testing with instruments as Video Fluoroscopic Studies (VFS) and Functional Endoscopic Evaluation of Swallowing (FEES), management includes direct remediation with compensatory techniques. Hence, patients with swallowing difficulty should be referred to speech language pathologists for detailed assessment and treatment.<sup>18,19</sup>

Medical practitioners and caregivers lack the expertise to assess and manage the feeding difficulties.<sup>20</sup> Screening, evaluation and management of dysphagia is the domain of speech and language pathologists, who should be the primary professionals to be involved. Though SLPs work in most hospitals, but there is lack of referral from medical practitioners from different professionals.<sup>21</sup> Hence this study is designed to understand and explore the awareness level of different professionals regarding role of SLPs in assessment and management of dysphagia.

## MATERIALS AND METHOD

The study was conducted in two phases, the development of the questionnaire and data collection. Questionnaire with 10 questions was developed based on the roles of SLP in assessment and management of dysphagia, as well as on awareness regarding role of SLP. The questionnaire was designed to provide forced choice answer for each question. Data collection was done in paper based format and online format using survey monkey. The total duration of data collection was one month from February 2017 to March 2017.

For the purpose of this present study, a descriptive non-experimental questionnaire was developed, to obtain information regarding the awareness of different professionals regarding the role and involvement of SLP in dysphagia assessment and management. The questionnaire was based on study by Meriweather (2006) and Kamal (2013). The questionnaire was directed towards multiple professionals hence common terminologies were used. The questions were simple and easy to understand, for which content validity was done with five professionals and the questions which were regarded as ambiguous were again reframed and validated by other five professionals. The total of 10 questions were included in the questionnaire, which were divided into two sections as personal and professional information and section related to training, awareness and involvement.

Data was collected from various medical professionals like Medical officer, Neurologist, Nurses, ENT specialist, Radiologist, Dietitian, physiotherapist, Occupational therapist and others working in government and private hospital, who were directly or indirectly involved in individuals with dysphagia. This was done to include professionals from different sectors of medical care. Responses obtained from professionals with no case load in dysphagia were excluded from the analysis. Purposive convenient sampling was done for data collection. The questionnaire was circulated among 250 professionals, who were blinded as to who was conducting the study to minimize the biasness in response. Out of the total response obtained, 106 responses were included for further evaluation. Of the total response included, 45 were paper based response and 65 were online responses. These responses were analyzed using SPSS (Statistical

Package for the Social Sciences) version 20 to obtain descriptive and inferential statistics.

## RESULT

The total of 106 respondents from various setup were included for the study. Out of which, 30.9% were from private and 69.1% were from public hospital. 49.03% of respondents were doctors and 51.9% were allied health professionals. Average time taken to complete was 8-10 minutes for paper based and 4-5 minutes for online survey.

In doctors group it was found that 17.31% were medical officers, 21.15% were ENT specialist, 0.96% were Neurologist, and 9.61% were Radiologist. Among allied health professionals 1.93% were dieticians, 6.73% were physiotherapists, 34.62% were nurses.

Most respondents (50.96%) had experience of less than six year, 26.92% of respondent had experience of 6 to 10 years and 22.12% had experience of more than 10 years.

Although, most respondents reported of having caseload with swallowing difficulty, it was found that only 10.58% of them followed protocol for dysphagia. Out of which, only one respondent referred case to SLP, all others managed using other tools as Naso-Gastric (NG) tube and Percutaneous Endoscopic Gastrostomy (PEG) tube, without detailed assessment of the swallowing difficulty.

On analyzing the data, relating referral to SLP, it was seen that 74.8% (54.8% never and 24% seldom) rarely referred patients with dysphagia to SLP for swallowing disorder. On further analysis, it was found that 25% did not know how to refer, 30.88% reported lack of professional in their practice, 26.47% were not sure of the role of SLP in swallowing disorder; which could be contributing factors in lack of awareness amongst professionals. Only 9.6% of respondents had attended any workshop related swallowing disorder, which could also be contributing factor for lack of awareness amongst professionals.

Further, on analyzing the awareness regarding the role of SLP in dysphagia assessment and management, 51.90% of professionals were aware of the role of SLP in performing thorough clinical examination, perform instrumental assessment, diagnose dysphagia and plan

intervention. 48.20% of respondent were not aware of SLPs role which could be again due to lack of awareness.

Table 1: Years of experience of professional and trend of referral to SLP

Duration of Work	Refer to SLP				
	Never	Seldom	Half the time	Usually	Always
<6 years	27	17	0	7	2
6-10years	17	1	2	7	1
>10years	13	7	1	1	1

Using Chi-square test, trend in referral was analyzed, in which cross tabulation was done for years of experience of professional and referral to SLP. The referral was found to be less and non-significant across all groups ( $p > 0.05$ ) and also no trend was noted with years of experience.

Table 2: Professional groups following protocol for referral

Professional Group	Following Protocol for Dysphagia	
	Yes	No
Doctor	6	47
Allied Health	5	48
Total	11	95

## DISCUSSION

Lesser referral to SLP as depicted in this present study, may be due to multiple reasons as lack of awareness amongst the professionals regarding the role of SLP in dysphagia management as well as their responsibilities as swallowing therapist.<sup>6</sup>

Lack of trained professionals in their practice may be one more factor leading to lesser referral. Present study showed 30.88% respondents lacked trained professionals at their practice. Only 9.6% of respondent in this current study reported of attending any workshop related to swallowing difficulty. The lack of formal training and workshops can be one of the factor leading to lower referral due to lack of awareness regarding the multidisciplinary team required in management of dysphagia. According to Logemann training for 4 to 5 hours can have a positive effect on the outcome of the clinician

compared to pre-training.<sup>22</sup> Similarly in Sri Lanka, positive effect after training was seen compared to pre-training.<sup>23</sup> Hence the fewer referrals of cases to SLP might be due to lack of training resulting in lack of awareness in regard to role of SLP in assessment and management of patient with swallowing difficulty.

In the current study we also aimed to understand, which role of SLP was most prevalent among professional in term of dysphagia assessment and management, it was found that 51.9% respondent were aware that SLP performed clinical examination with instrumental assessment, diagnose and plan treatment, whereas rest of the respondents (48.2%) were unaware of SLP's role in dysphagia. Similar finding was reported in study of MO, where 66% respondents were aware that SLP perform clinical examination, 62.3% reported of instrumental analysis as role of SLP, 43.4% responded that SLP diagnose dysphagia. It was seen that half of the respondents similar to our study were aware of the role of SLP in assessment and management of dysphagia. Speech Language Pathology field in most of the developing countries like Nepal is still in its infancy and developing, which will require many years of research to mature due to which awareness in the medical professionals may be limited regarding the role of SLP in dysphagia assessment and management.<sup>24</sup> With better awareness among professionals, better care can be given to person with swallowing difficulty resulting in improved quality of life (QoL).

The current study demonstrated low level of awareness in medical professional regarding the role of SLP in assessment and management of patient with swallowing difficulty. Though the case loads seem more with dysphagia, due to lack of proper training and man-power, the service delivery seems to be hindered. Hence, some training in formal education system is highly desirable. As demonstrated by other studies, even short courses can also have positive impact in service delivery.

## CONCLUSION

Field of speech language pathology is still in its infancy and there is lack of awareness regarding their role in assessment and management of individuals with swallowing difficulty. Adaptation

and addition of formal training in education will significantly improve awareness, which might lead to better awareness and management of individuals with swallowing difficulty.

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