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Awareness and Knowledge of Speech Language Pathologists regarding Pediatric Feeding Disorders

Maryam Ch¹, Anum Ashraf^{2*}, Mahnoor Mansoor³ and Mavra Shaukat⁴

¹Riphah International University, Lahore, Pakistan

²Johar Medicare Complex, Lahore, Pakistan

³Govt Special Education Centre, Nankana Sahib, Pakistan

⁴Emerging Minds Therapeutic Services, Lahore, Pakistan

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*Corresponding Author:

Anum Ashraf
Johar Medicare Complex, Lahore, Pakistan
anumslp@gmail.com

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ABSTRACT

Feeding is like a tremendous process involving multiple systems that are interconnected with each other. The speech pathologist plays an important role in helping the child develop a positive relationship with his or her mouth and food, as well as learning how to eat enjoyably, carefully, and efficiently. **Objective:** To determine knowledge of Speech Language Pathologists about the Pediatric Feeding Disorders. **Methods:** It was a cross sectional study. Data were collected from the Speech Language Pathologists through online questionnaire generated through Google forms after taking permission letter from Research and Ethics committee. Non-probability convenience sampling technique was used. Sample was calculated 157 on the basis of total number of BS graduate Speech Language Pathologists by using 95% confidence interval through sample size calculator Rao soft. Data were analyzed in SPSS 21 using descriptive statistics including frequency tables and bar charts. **Results:** Total 157 responses were received. 145 were females and 12 males participated in this study. Out of 157 participants, 60.51% SLPs reported that they do not feel confident on their clinical expertise regarding pediatric feeding disorders and 92.4% SLPs reported that they need more knowledge and training to deal with pediatric feeding disorders. **Conclusions:** Many Speech Language Pathologists in Pakistan have little knowledge about the management and treatment of PFDs. They do not feel safe to evaluate, assess and intervene with pediatric feeding disorders. Therefore, they feel less confident on their treatment strategies regarding pediatric feeding disorders.

INTRODUCTION

Feeding is like a tremendous process involving multiple systems that are interconnected with each other like central nervous system, peripheral nervous system, gastrointestinal, oropharyngeal and cardiovascular systems. If any one of these is disrupted, it will cause risk of feeding complications and often contribute to emergence of pediatric feeding disorders [1]. The major feeding milestones are latches to nipple, breast/bottle feeding, spoon feeding, cup drinking and chewing solid food [2]. First two years of child's life are very important for feeding development. Usually feeding procedure is more obvious during the age of six months to four years. Around the age of 2-3 years, child's oral motor development is complete for feeding [3]. Feeding disorder is characterized by an

inability or rejection to eat and consume enough food that is required to maintain a sufficient nutritional status. Feeding disorders may cause significant nutritional, organic and emotional risks that may include developmental delays and irregular growth patterns [4]. Pediatric feeding disorders are characterized as "impaired oral intake that is not age appropriate and is linked to medical, nutritional, feeding, and/or psychosocial domains, as well as medical, nutritional, feeding abilities, and/or psychosocial dysfunction" [5]. Children who are diagnosed with developmental, medical and behavioral problems have higher rate of feeding and eating difficulties [6]. Some developmental factors may contribute towards PFD including delay in development of motor skills,

language, lack of cognition and socialization. Feeding behavior is affected by behavioral health issues in the child and the parents. Some environmental factors may result in formation of pediatric feeding disorders like at mealtime disturbing environment in the surrounding. For example, television or use of electronic instruments or feeding the child only at the irregular time like when he/she is sleeping or tired [4]. Some structural abnormalities that impact feeding process include cleft lip/palate, missing and irregular oral pharyngeal structures, misalignment and malocclusion of teeth, shortened tongue frenulum and incomplete development of laryngeal structures. Feeding disorders can also be caused by neurological impairments and neurodevelopmental issues that mainly influence oral motor structures and also create muscular problems, poor movement and coordination in the whole body e.g., CP, Down syndrome [7]. Sometimes sensory issues in children can increase the risk of pediatric feeding disorders. Food look, flavor, aroma, texture and temperature can reduce their food intake [8]. Risk of feeding problems is 5 times higher in autistic children in comparison with non-autistic children [9]. Many health practitioners from different disciplines are required to deal and manage feeding related issues. Pediatric feeding team members may vary but they usually include doctors who may be developmental pediatricians, neonatologists, gastroenterologists, nurses, speech-language pathologists, nutritionists, occupational therapists, physical therapist and psychologists. Speech-language pathologists are referred as feeding specialists [10]. Speech Language Pathologists create a interesting relationship between food an child's mouth. They help the child how to cope with feeding fear and eat happily and effectively [5]. As a Speech and Language Pathologist its mandatory to have proper knowledge regarding normal and disordered feeding and swallowing procedure in order to perform feeding and swallow assessments and recommend proper treatments depending on every child's condition [11]. Speech Language Pathologist's job is to assess oral motor functioning, screening, formal and in formal clinical examination of swallowing. SLP plays an important role in treatment of feeding and swallowing issue and helps the child in formation of effective oral sensorimotor abilities [11]. SLP also counsel family and caregiver regarding effective mealtime location and schedule to enhance feeding habits [12]. The feeding and swallowing assessment involves observation of child's health condition, oral motor development, gross and fine motor skills, neurological functioning and child's nutritional intake. A comprehensive oral motor examination is required if there is abnormal oral motor function [13]. Oral motor strategy is the first treatment strategy used by

Speech Language Pathologists in the management of feeding and swallowing disorders. Speech Language Pathologists use compensatory swallowing strategies that are helpful to increase oral muscular strength, protect the airways, and make the swallow safe and smooth. For formal assessment of swallowing disorders Speech Language Pathologists mostly use two formal tools the first one is Video Fluoroscopic Swallowing Study (VFSS) and the second one is Flexible Endoscopic Evaluation of Swallowing (FEES) [14]. A detailed feeding assessment also include child's mealtime evaluation. It helps us in observing child's feeding behaviors, designing and choosing appropriate treatment for the child. In mealtime evaluation Speech Language Pathologists provide food to the child and carefully observe the oral phases of swallowing [15]. Literature reveals that there is little awareness regarding Pediatric feeding disorders. Many Speech and Pathologists in Pakistan are not fully aware of pediatric feeding disorders. They have little knowledge about the management and treatment of PFDs. Therefore, they feel less confident on their treatment strategies regarding pediatric feeding disorders. There is a need to create awareness about pediatric feeding disorders and to train Speech Language Pathologists and caregivers as well about how to handle child's feeding problems. The Purpose of this study is to determine the knowledge of Speech Language Pathologists regarding pediatric feeding disorders.

METHODS

A cross-sectional study was conducted at Riphah International University, Lahore. Sample was calculated 157 on the basis of total number of BS graduate Speech Language Pathologists (N=263) by using 95% confidence interval and 5% margin of error through sample size calculator Raosoft. Non-probability convenience sampling technique was used for data collection. Data were collected through online questionnaire developed by the help of expert opinion and literature after taking permission letter from Research and Ethics Committee issued on January 2, 2023 with Ref No: REC/RCR &AHS/23/0620 Data were collected through online questionnaire developed by the help of expert opinion and literature. Inclusion criteria was Speech Language Pathologists currently working in hospitals, rehabilitation centers and educational institutes will be included in study and exclusion Criteria was under-graduates Speech Language Pathology students working as an intern will be excluded from the study. Data were collected from Speech Language Pathologists working in hospitals, rehabilitation centers and educational institutes. Informed consent was taken from all participants. Data were analyzed in SPSS 21 using descriptive statistics including frequency tables and

bar charts.

RESULTS

Total sample consists of 157, participants among them 92.4% were females and 7.6% males. Among 157 Speech Language Pathologists, 71 had Bachelor's degree in Speech language Pathology, 44 SLPs had Masters degree in Speech Language Pathology, 40 SLPs had both Bachelors and Masters degrees and 2 were PHD Scholars. Total 121 Speech language Pathologists had working experience of less than 5 years, 30 SLPs had working experience of 5 to 10 years and 6 SLPs had working experience of more than 10 years (Table 1 and 2).

Table 1: Frequency and percentage of academic qualification

Academic Qualification	Frequency (%)	Valid Percent	Cumulative Percent
Bachelor's degree in SLP	71(45.2)	45.2	45.2
Post graduate/ Master's degree in SLP	44 (28.0)	28.0	73.2
Both	40 (25.5)	25.5	98.7
PHD	2 (1.3)	1.3	100.0
Total	157(100)	100.0	

Table 2: Frequency and percentage of working experience

Working experience	Frequency (%)	Valid Percent	Cumulative Percent
Less than 5 years	121(77.1)	77.1	77.1
5 to 10 years	30 (19.1)	19.1	96.2
More than 10 years	6(3.8)	3.8	100.0
Total	157(100.0)	100.0	

Out of 157 participants, just 55 Speech language Pathologists reported that they had received clinical training on pediatric feeding disorders at graduation. Only 45 Speech language Pathologist reported that they are currently dealing with pediatric feeding disorders while 112 SLPs reported that they are not currently dealing with PFDs

Table 3: Frequency and percentage of received clinical training on pediatric feeding disorders at graduation

Received clinical training on pediatric feeding disorders at graduation?	Frequency (%)	Valid Percent	Cumulative Percent
Yes	55(35.0)	35.0	35.0
No	102(65.0)	65.0	100.0
Total	157(100)	100.0	

Table 4: Frequency and percentage of SLPs currently dealing with pediatric feeding disorders

Currently dealing with pediatric feeding disorders?	Frequency (%)	Valid Percent	Cumulative Percent
Yes	45(28.7)	28.7	28.7
No	112 (71.3)	71.3	100.0
Total	157(100.0)	100.0	

Among 157 participants, 62 Speech Language Pathologists reported that they feel confident on their clinical expertise regarding Pediatric feeding disorders while 95 SLPs reported that they do not feel confident on their clinical expertise regarding Pediatric feeding disorders (Table 5).

Table 5: Frequency and percentage of SLPs feeling confident on your clinical expertise regarding PFDs

Feel confident on your clinical expertise regarding Pediatric feeding disorders?	Frequency (%)	Valid Percent	Cumulative Percent
Yes	62(39.5)	39.5	39.5
No	95(60.5)	60.5	100.0
Total	157(100)	100.0	

DISCUSSION

After searching literature regarding knowledge of Speech Language Pathologists about pediatric feeding disorders. We found that majority of SLPs have insufficient knowledge regarding pediatric feeding disorders [16]. According to Wilson et al., study, 134 survey participants reported that they received less education and training regarding pediatric dysphagia during their graduation [16]. This current study reported that out of 157 participants 64.9% Speech Language Pathologists reported that had not received clinical training on pediatric feeding disorders in graduation. Krikheli et al., concluded that speech language pathologists clearly have a role in the pediatric palliative care team throughout the literature but there is little information regarding appropriate speech language pathologist assessment and intervention approaches for this population. This study showed that 50.24% Speech Language Pathologists reported that they had no knowledge about the formal assessment (screening tools) regarding pediatric feeding disorders [17]. The present study indicated that 46.50% Speech Language Pathologists reported that they do not feel safe to evaluate, assess and intervene with pediatric feeding disorders. This correlates with the study of Zingler et al., that highlighted that knowledge of SLPs for working with pediatric feeding disorders proved to be insufficient and majority speech language pathologists do not feel safe to handle cases with pediatric feeding disorders [5]. Knollhoff, concluded a study to evaluate how speech language pathology graduate

courses provide training and clinical knowledge regarding pediatric feeding and swallowing disorders. According to his study 60% participants reported they feel less confident to deal pediatric feeding and swallowing disorders [18]. This study indicated that 60.51% SLPs reported that they do not feel confident on their clinical expertise regarding pediatric feeding disorders. The present study showed that majority of Speech Language Pathologists reported that they need more knowledge and training to deal with pediatric feeding disorders. Likewise O` Reilly and Walshe, concluded that Speech Language Pathologists around the world perceive that they have important role in palliative care. But this clinical area is under developed. There is a need of further research and clinical training to educate SLPs and multidisciplinary team members in the domain of palliative care [19]. According to Zimmerman study, out of one hundred speech language pathology master degree programs just 21% programs offered a course in pediatric dysphagia and 64.50% SLPs reported that they feel less confident to work with dysphagia population. The current study indicated that 49.7% Speech Language Pathologists had not taken any courses on pediatric feeding disorders in their academic curriculum [20].

CONCLUSIONS

This Study concluded that many Speech and Pathologists in Pakistan are not fully aware of pediatric feeding disorders. They have little knowledge about the management and treatment of PFDs. They do not feel safe to evaluate, assess and intervene with pediatric feeding disorders. Therefore, they feel less confident on their treatment strategies regarding pediatric feeding disorders.

Authors Contribution

Conceptualization: MC, AA

Methodology: MC, MM

Formal analysis: AA

Writing-review and editing: MC, MM, MS

Author have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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