



# Speech Language Pathologists' Assessment Practices for Children with Suspected Speech Sound Disorders

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## ABSTRACT

**Background:** Speech sound disorders (SSD) are disabling conditions that effect social, emotional and cognitive well-being of children. Proper assessment is crucial for finding out the nature of SSD and thereby developing appropriate strategies for treatment. No work has been done regarding the assessment procedures used by SLP's in current setting.

**Objective:** Objective of this study was to determine the assessment practices used by speech and language pathologists for children with suspected speech and sound disorders.

**Methodology:** This was a descriptive cross sectional survey, conducted in clinical set ups of Lahore. The target population was Speech Therapists. Using sample of convenience, total sample size taken was 112 speech therapists. Data were collected through Questionnaire as hands out.

**Results:** Out of total 112 respondents 24 (21.4%) were independent studying, 56(50%) were of graduate and 32(28.6%) were having other qualification not mentioned in questionnaire. Out of total 112 respondent, 40 (35.7%) were using clinical assessment always, 32(28.6%) were using it sometimes, 8(7.1%) were using it in frequently and 32 (28.6%) never used clinical assessment of articulation. And this is the maximum use.

**Conclusion:** The most frequent tests used for assessment for Speech Disorders are Fisher Logeman Test, Goldman Fristoe and Banks on Test. Majority of Speech therapists also prefer to use prolong Directive Method of assessment through functional activities.

**Key Words:** Speech Pathologist, Speech Sound Disorders, Assessment, Articulation Disorders

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## INTRODUCTION

Sound or Speech disorders are the disorders of communication in which the normal sound and speech is impaired. This can result into number of further disorders. If strict screening be followed, only 5 to 10 percent of population would come under normal sound and speech disorders<sup>(1-3)</sup>. If we further narrow down the types of disorders associated with speech, there are number of these such as apraxia of speech, cluttering, developmental and verbal dyspraxia, dysarthria, dysprosody, muteness, speech sound disorder, on which this study is mainly focused, and voice disorders<sup>(4-8)</sup>. Main proportion of these disorders is manageable by speech therapy. Some may require medical support. Psychotherapy has also good results in correction of organic conditions. If treated more sophisticatedly, patients can be treated in teams including speech and language pathologists, teachers, medical specialists and family members<sup>(9-10)</sup>. Many speech and language pathologists think

that phonological assessment and treatment of children produces confusion in comparison to clinical assistance. This thinking produces a question mark on application of phonological concepts regarding assessment and interventional strategies. One potential benefit of such confusion is due to the big expectation from old techniques. New terms and techniques should be developed and used in place tool done to mark a clear demarcation. Currently the old techniques are being used with new different names. That creating total confusion<sup>(11)</sup>.

A study conducted in United Kingdom among speech language pathologists to find out practice patterns about assessment and treatment of phonology in children. Most of therapists were found using South Tyneside Assessment of Phonology for assessment of children<sup>(12)</sup>. A study conducted in this regard to compare two methods systematically, for phonological assessment. Two methods were conversation and picture naming



method. All subjects were male with impaired phonology. All subjects had not received speech language pathology before this Disease's severity level. Statement of guidelines and patient load, these all determine choice of assessment used by clinician. For speech sound disorders assessment, therapists it is the expertise of therapist how to balance in time and methods, how to get relevant data and how to decide what method should be preferred.

The opinions of these clinicians were presented in the 2002 American Journal of Speech- Language Pathology (AJSLP). The authors who contributed to the 2002 AJSLP Forum on Phonology presented a variety of standardized and non-standardized procedures for the assessment of SSD. Three of the authors assessed expressive speech and phonological skills using a published single-word test such as the Goldman Fristoe Test of Articulation <sup>(13)</sup>. No work has been done regarding the assessment procedures used by SLP's in current setting, as there was no literature found. This study will help create evidence for SLP's and clinicians to evaluate their assessment procedures and compare them to those mentioned in the literature and used by expert clinicians. It is suspected that very little is known in clinical practice patterns regarding assessment of phonological disorders. This study would be beneficial for Speech Language Pathologists and may lead to new directions in relevant research.

## METHODOLOGY

It was an observational cross sectional survey. Study was completed in 6 months. Total population size of speech therapist was taken as 400, and using sampling calculator, keeping confidence level 95%, confidence interval 5%, sample size calculated was of 132 or more. Non-Probability Convenience Sampling Technique was used to collect data. Informed consent was obtained from the participants fulfilling the inclusion criteria. Self-administered, 51 item validated instrument was used to collect data from the participants regarding their education, experience, working conditions and assessment practices. Some items on the instrument form ensuring participants' frequency of use of commercially available tests, implementation of

assessment procedures, and speech sound analysis procedures, had to be answered on Likert Scale. All collected data was entered in computer program SPSS version 16 and analyzed through this software. Mean and median were calculated for quantitative data along with the frequencies for the percentages and categorical data.

## RESULTS

Out of total 112 respondents 24(21.4%) were independent journal studying, 56(50%) were of graduate and 32(28.6%) were having other qualification not mentioned in questionnaire. Out of 112 respondents 16(14.3%) were school psychologist 8(7.1%) were teacher of cognitively disabled 72(64.3%) were class room teachers and 16(14.3%) belong to other profession not mentioned in questionnaire. Out of 112 respondents 8(7.1%) were using standardize test always 56(50%) were using sometimes, 24(21.4%) were using infrequently and 24(21.4%) never use standardize test for client native language. Out of total 112 respondents 40(35.7%) always use developed local norms, 40(35.7%) were using it sometimes, 8(7.1%) were using infrequently and 24(21.4%) never use the developed local norms.

Table I: Highest Degree Obtained

Variables	Numbers	Percentage	Cumulative Percent
Graduation	38	64.3	64.3
Master	1	0.98	92.9
PHD	30	53.8	100.0
Total	112	100.0	

Out of total 112 respondents 8(7.1%) were assessing 11-20 minutes, 56(50%) on 21-30 minutes, 32(28.6%) were assessing 31-40 minutes and 16 (14.3%) take 41-50 minutes when assessing pre assessment activities. Out of total 112 respondents 8(7.1%) were assessing in 5-10 minutes, 16(14.3%) were assessing 11-20 minutes, 64(57.1%) were taking 21-30 minutes and 24(21.4%) were taking 31-40 minutes during formal and informal assessment.

**Table II: Phonological Assessment: Areas that Describe the Phonological Assessment Training**

Variables	Numbers	Percentage	Cumulative Percent
Independent	24	21.4	24.4
Journal Study	56	50.0	71.4
Graduate Study	32	28.6	100.0
Total	112	100.0	

**Table III: Phonological Assessment: Professionals are typically involved in the assessment of your client**

Variables	Numbers	Percentage	Cumulative Percent
School Psychologist	16	14.3	14.3
Teacher of the Cognitively Disabled	56	7.1	21.4
Classroom Teacher	72	28.6	85.7
Total	112	14.3	100.0

Out of total 112 respondents 72(64.3%) were having Master level Degrees, 4 (0.98%) were PhD and 8 (53.8%) were having other qualification not mentioned in questionnaire.

**Table IV: Phonological Assessment: The most typical parent involvement during the assessment process**

Variables	Numbers	Percentage	Cumulative Percent
Completes Mail-In Case	8	7.1	7.1
History Form Live Interview Phone Interview	80	7.1	14.3
Accompanies Child during	40	35.7	50.0
Assessment	32	28.6	78.6
Parent/ Child Play During	24	21.4	100.0
Assessment	112	100.0	

Out of total 112 respondent 8(7.1) were assessing by their self and 104 (92.9%) were assessed by audiologist for screening test

**Table V: Phonological assessment: Hearing screening is conducted as part of the assessment who typically administers the screening**

Variables	Numbers	Percentage	Cumulative Percent
My Self	8	7.1	7.1
Audiologist	104	92.9	100.0
Total	112	100.0	

## DISCUSSION

There is no one test being used among speech therapists for assessment of speech disorders. The present study revealed that speech therapists here in Pakistan consisted of vast variety in their routines, preference patterns and skills about using variety of assessment tools. The present study showed that speech therapists even start from hearing screening as a part of hearing assessment. This on one hand reflects that how information technology have prevailed this area of health care too, on other hand reflects the skill of therapists involved that all speech therapists are aware enough of new computer technology being used in their field. This aspect matches with international patterns, where all the computerized equipment is being used<sup>(15-16)</sup>.

The frequency of use markedly increased here. Although cross cultural adaptation solution discussed earlier is ultimate one, but for time being speech therapists are using scales with change norms according to the needs, culture and understanding of Pakistan. However, their validity is questionable. So, refer to the ultimate solution i.e. cross cultural adaptation. Internationally there is very less literature which would support use of tools with changed norms on therapist level<sup>(21)</sup>. Formal testing procedures and tests questions revealed that Bertha Banks on test of Phonology is not being used. Very less proportion found using it while international literature shows its wide use<sup>(22)</sup>. Among tests and procedures Fisher Longman had maximum use frequency.

Then Goldman Tristoe Test, then Hodson Test, after that is Khan Lewis Test the least used. Irrespective of their use internationally, there is much reduced use of these validated tools. What is mostly used is



clinical assessment methods<sup>(23-26)</sup>. This showed that speech therapists are aware of these tools but use of these tools is not part of their practice. Major barrier may be different native language of tools that neither feasible for therapists nor the patients or parents. Use is also influenced by trend in market and academic training institutions. Senior speech therapists are using Fisher Longeman Test because it is old one<sup>(27)</sup>, and accepted among speech therapist. Also the marketing forces may act in its enhanced use<sup>(28-30)</sup>. Clinical examination is the main procedure being used in speech therapy practice in Pakistan. It is easy to conduct for most therapists despite the fact that it require more expertise before to interpret results as an independent clinician. It requires more practice, more trials and errors. But once clinicians are expert in it, they are individuals with possessing strong clinical judgment and decision making<sup>(3,31)</sup>.

## CONCLUSION

The most frequent tests used for assessment for Speech Disorders are Fisher Logeman Test, Goldman Fristoe and Bankson Test. And majority Speech therapists also prefer to use prolong Directive Method of assessment through functional activities.

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