



# Comparative Effects of Group and One to One Speech and Language Therapy on Language Development of Hearing Impaired Children

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## ABSTRACT

**Background:** Children with hearing impairment face speech and language deficits throughout their lives; hence they develop non speaking attitudes. Speech and language therapies are planned to develop oral/verbal language skills in students with hearing impairment. The therapy may be individualized or in groups depending upon time, duration, resources and extent of disability. This study aimed to find the effectiveness of group and individual therapy on language development of hearing impaired students. The population comprised hearing impaired students in Lahore district. The sample constituted twenty students from class one randomly selected and having a severe to profound degree of hearing loss. A quasi experimental study based on pre-posttest design. The findings are indicative of effectiveness of group approach as compared to the individualized therapy.

**Objective of Study:** The objective of the study was to find out the difference in terms of speech and language development as a consequence of group and individualized therapy plans in children with hearing impairment.

**Methodology:** A quasi – experimental research conducted to explore the effects of individualized (one to one) and group therapy on language development of students with hearing impairment. The study was delimited to the students having severe to profound degree of hearing losses and studying in Grade 1. A sample of 20 students was selected through random sampling technique. It was a pre-posttest designed study. A tool comprising a list of ten words was developed with the help of speech language experts to ascertain the areas of language including, vocabulary, articulation and expressive skills. The words were taken by the syllabic content of the students with the help of the teacher and were piloted before the final application. A pre-test was conducted of each group before the intervention, which comprised 12 therapy sessions. The intervention was provided in terms of group and individualized group therapy. Later a post test was conducted to find out the impacts of individual and group therapy session. Mean scores of individual and group sessions were compared to see differences, if any.

**Results:** Mean scores in pre and post- test group therapy session were more than individual or one to one therapy mean scores. The group therapy method for students with hearing impairment was found more effective than individualized for language development.

**Conclusion:** Individualized as well as group therapy language interventions proved to be effective, however grouped models found more effective for the language development, specifically in the areas of articulation, vocabulary and expressive form for children with hearing impairment.

**Key Words:** Hearing Impairment, individualized, Group session, Severe to Profound

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## INTRODUCTION

Language development is a progression in language abilities in terms of receptive and expressive skills. Language is made up of socially shared rules while speech is a verbal mean of communication - comprising articulation, voice and fluency”<sup>(1)</sup> as a newborn starts to speak and comprehend language it becomes a great inspiration and achievement for the family. The possibilities in which parents are communicating to their children have an impact on language development. If the parents are creating opportunities of learning language then high or low communication from parents does not matter.<sup>(2)</sup> Since language acquisition is a social phenomenon social factors of language

acquisition include input, responsiveness, and understanding.<sup>(3, 4)</sup> Language learning has been addressed by linguists in terms of behavior, cognitive and social phenomenon.<sup>(5)</sup> In behaviorism learning a language is associated with the environment's stimuli and individual behavior. This process of forming the linguistic behavior is a result of classical conditioning. Operant conditioning forms child linguistic capacity by reshaping behaviors using rewards and punishment. Proponents of linguistic approach argued that language is a human instinct. Linguistic approach argued that human have genetic basis and the language learning prototypes depends on the environment, culture and particular languages spoken in that



environment and culture.<sup>(6)</sup>

Language development is significantly effected in children with hearing impairment. Hearing impairment restricts children capability to learn language. Early identification and intervention may result in developing appropriate speech and language skills. Even severe to profoundly impaired children can learn to communicate with intervention.<sup>(7)</sup> In earlier times, oral methods of communication were rendered unsuitable for profoundly deaf individuals however with the emerging technologies the myth has been duly addressed. Appropriate augmentation (hearing aids), teaching styles, parental involvement, and extensive speech language therapies have made it possible for hearing challenged individuals to develop a repertoire of spoken and receptive language skills<sup>(8)</sup> The total communication method was developed to integrate hard of hearing people into the hearing world.<sup>(9)</sup>

## METHODOLOGY

The study was aimed to see the effectiveness of language interventions on the hearing impaired children in one to one and group language therapy sessions. The mode of language for conducting the language intervention session was Urdu. The level of intelligence was average for the hearing impaired children. Trained Speech language therapists were engaged to conduct intervention during this study. 20 hearing impaired students were selected through randomized sampling and divided into two, i.e. an individual and group setting. (10 students in each group). The sample comprising both genders was taken from class one of primary section of Hamza Foundation. The sample comprised students of age 6-7 years and having severe to profound degree of hearing loss having significant language deficits. The tool for the study comprised a list of ten words taken from syllabic content of class one with the consultation of the teacher and relate to the "Practical Tool of Communication Building" compiled by Speech Language experts. The average difficulty level tool was developed keeping in mind the vocabulary in Urdu language

and was assessed using, standardized evaluation procedures. The activities included in the tool are comprehensive to use for individual and group language therapy sessions. The activity of the tool named 'first letter maze fun' was designed to assess and develop the single sounds in the theme of vocabulary, intelligibility/articulation and expressive/total communication. There were 10 pictures in the first activity whose first letters were to be written/spoken by the hearing impaired child of individuals and groups sessions. Before the administration of the test a pilot-test was conducted to see the level of difficulty and ease of applicability. The tool was found reliable on the Cronbac's alpha's scores. Individuals and groups did not show up to the mark performance in the pre-test. Afterwards language intervention sessions were started and taken by a team of speech language therapists already working with students. The pre-posttest scores were collected by Speech and Language therapists and analyzed through SPSS. To see the comparative effects of individual versus group interventions on the language development of the hearing impaired students, independent sample t-test was used.

## RESULTS

The results reveal that the performances of children with hearing impairment has increased after receiving language intervention sessions and a significant difference of language development has been found in one to one versus group performances. The result is indicative of a significant difference in the mean values of group session as compared to the individual scores, i.e. 109.25 versus 84.25, respectively.

Table 1: Mean Difference in one to one versus group interventions on language development

Activity	One to one language intervention			Group language interventions			95% CI for mean difference	t	df
	M	SD	N	M	SD	N			
	84.25	1.70	10	109.25	1.73	10	-28.22, -22.27	-20.76*	6



Following table is indicative of pre and post test scores. As is obvious the scores after intervention, i.e. post test scores are significantly different as compared to pretest means

Table 2: Language development mean scores .(Items Pre-and Post test)

	word	Aspects of language	PRE TEST		POST TEST	
			Mean scores		Mean scores	
			Individual	Group	Individual	Group
1	کرت	Vocabulary	1.00	1.00	2.25	3.00
		Articulation/Intelligibility	1.00	1.00	2.50	3.00
		Express/total communication	2.25	2.25	3.00	3.50
2	سی	Vocabulary	1.75	2.00	3.00	3.50
		Articulation/Intelligibility	1.75	2.00	3.00	4.00
		Express/total communication	2.75	2.75	3.00	4.00
3	دانت	Vocabulary	1.75	1.75	2.00	3.25
		Articulation/Intelligibility	1.75	2.00	2.50	3.25
		Express/total communication	2.75	3.00	3.25	4.00
4	ثورل	Vocabulary	1.25	1.75	3.00	3.50
		Articulation/Intelligibility	1.25	1.50	2.75	3.50
		Express/total communication	2.75	2.75	3.25	4.00
5	پار	Vocabulary	1.25	1.25	3.00	4.00
		Articulation/Intelligibility	1.25	1.50	3.00	4.00
		Express/total communication	3.00	2.75	3.00	3.75
6	بت	Vocabulary	1.50	2.00	3.00	4.00
		Articulation/Intelligibility	1.50	1.25	2.75	4.00
		Express/total communication	2.75	2.75	3.00	3.75
7	جوتا	Vocabulary	1.50	1.50	2.25	4.00
		Articulation/Intelligibility	1.50	1.50	2.75	4.00
		Express/total communication	3.00	2.75	2.75	4.00
8	کچر	Vocabulary	1.25	1.25	2.25	3.00
		Articulation/Intelligibility	1.75	1.50	2.50	3.00
		Express/total communication	3.00	3.00	3.00	3.75
9	مل	Vocabulary	1.00	1.50	3.00	4.00
		Articulation/Intelligibility	1.00	1.75	3.25	3.75
		Express/total communication	3.00	3.00	3.00	3.75
10	بکر ان	Vocabulary	1.25	2.00	2.50	3.25
		Articulation/Intelligibility	1.25	2.00	2.75	3.00
		Express/total communication	3.00	2.75	3.00	4.00

## DISCUSSION

The issues surrounding language learning and Hearing Impairment deserve attention of professionals (speech and language therapists). Research has supported the efficacy of intervention strategies in the form of individual and group therapy session in the development of language acquisition. Logical problems of language acquisition provide an interesting area of investigation for one to one sessions and group sessions from speech and language therapists. <sup>(10)</sup> A recent research illustrated that children show more improvement in expressive language skills after speech and language therapy interventions rather than receptive language. The study evaluated significance

difference in the individual and group therapy sessions for children with speech and language delays. Group language therapy sessions lower down the cost of speech and language therapy programs. <sup>(11)</sup> Research conducted by Law explored that there is no significant difference in group and individual language therapy programs for children with speech and language deficits. <sup>(12)</sup>

A study evaluated the 2 groups of children on verbal abilities before giving intervention similar to current study. The children whose were already taking the interventions prior to this specific intervention programs, showed positive results and perceptions towards speech behaviors. On the other hand the children who were new to these interventions or have not gone through such kind of specialist in intervention programs showed less performance after the completion of that intervention. The children who were receiving individual therapy sessions were found to be better in language development. The results show absence of most speech behaviors and intentions in these children <sup>(13)</sup> almost similar result to current study found to be most excellent in language development of children in group as compared to one to one speech and language therapy sessions. Bruner argued that one to one interaction with child is an essential part to develop language. On one to one interactions children are more tend to comprehend and generate intangible grammatical language <sup>(14)</sup> Bryan A. investigated that his client improves language command and learn sounds of new words and imitation effectively in a group therapy settings rather than when he was in one to one teaching programs.

## CONCLUSION

There is a significant difference in the language development before and after the speech and language intervention sessions which determines the effectiveness of the treatment. It is divulged from the study that language development of children with hearing impairment can be enhanced more effectively when done in a group therapy session. Both



modes of speech and language interventions are effective but group mode is more effective to develop language in rather short period of time.

## RECOMMENDATIONS

Group therapy sessions for language development of hearing impaired will lower down the cost of therapy programs and can also serve to address the shortage of school therapists. Training courses and workshops for teachers and parents must be planned in order to continue the learnt skills in routine environments. This study must be conducted at larger scale in public school for hearing impaired with a larger sample and an extensive list.

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