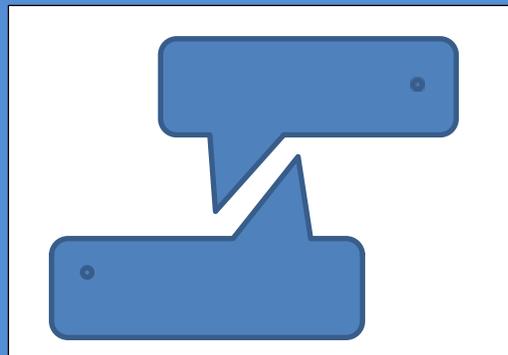


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## **Word and Syllable Shapes in Imitation of Kannada Sentences: A Reflection of Developing Phonological Representations**

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### **Abstract**

Phonological representations play a significant role in the development of verbal language skills and hence, assessment of phonological representations, especially during the developmental stages is gaining attention in the recent years. Several investigators have described the role of phonological representations in immediate sentence recall in addition to that of semantic representations. The clinical relevance of using an imitation task compared to spontaneous speech to establish the speech sound inventory or the various aspects of phonology has also been well established. In this study, a sentence imitation task in Kannada language was administered on typically developing Kannada speaking preschoolers in the age range of 3;0 to 5;0 years. Phonotactic analysis of the imitated utterances in terms of word and syllable shapes was carried out in an attempt to understand the nature of phonological representations. Results revealed a significant effect of age on the development of phonotactic patterns and thereby the corresponding phonological representations. Children in the age group of  $\geq 3;0$ - $< 3;6$  years were significantly different from all the other groups of participants. In addition, younger children were observed to reduce the tri and polysyllabic structures to bisyllables in their imitated utterances. These findings offer further support to the contribution of phonological representations in sentence recall. Sentence imitation may thus be considered as a task of significant clinical relevance in the assessment of phonological representations during the preschool years.

**Keywords:** Phonotactics, word shapes, syllable shapes, sentence imitation, phonological representations

### **1. Introduction**

Phonotactic rules describe the shape and sequence of sounds in words (Velleman, 2002). Syllable structure plays an important role in planning and production of speech (MacKay, 1972). The phonotactic patterns of a language are implicitly learnt by typically developing children during their developmental years. Many investigators have addressed the need to examine phonotactics in children with disordered phonologies (Bernhardt, 1994; Bernhardt & Stoel-Gammon, 1994; Velleman, 1998; Velleman, 2002) as they have limited phonetic and phonotactic repertoire. Phonotactic

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analysis of speech in children provides a greater insight into phonological aspects compared to the information obtained from the phonetic repertoire alone (Velleman, 2002). Knowledge of phonotactics helps in the treatment planning for children with praxis breakdown.

Phonotactic patterns were explored in typically developing children speaking various Indian languages like Kannada (Rupela & Manjula, 2006), Telugu (Neethipriya, 2007) and Hindi (Shailaja & Manjula, 2011) during the developmental years. Rupela and Manjula (2006) studied the phonotactic development in 30 typically developing children in the age range of 0-5 years. Elicited spontaneous speech samples and word imitations were used as stimuli and the analyses of word and syllable shapes were carried out based on 100 fluent utterances selected from samples of each child. They observed that certain word shapes were acquired before others, for example, CV syllables were acquired before VC and CVC syllables. Cs occurred rarely and were acquired in children between the age ranges of 0-18 months. Vs were also found occasionally but they occurred more frequently than Cs. The occurrence of medial geminates were the highest followed by medial non-geminated clusters, initial clusters and medial three-sound clusters. Monosyllables occurred rarely in children's speech and they were found to occur from 24 to 60 months. Amongst word shapes, disyllables occurred most frequently followed by trisyllables and multisyllables. Overall, all the syllables in Kannada language described in adult phonology (Hiremath, 1980) were found to be acquired by children by the age of 12-18 months, although the frequency of occurrence varied widely. CV syllables were most common followed by VC and CVC syllables.

Connected speech samples are reported to provide an in depth analysis of the precision of phonological representations as compared to single word utterances (Andrews & Fey, 1986; Anthony et al., 2010; Morrison & Shriberg, 1992) The importance of using connected or continuous speech samples for the assessment of phonological accuracy in children have been widely acknowledged in the literature. In the recent years, sentence imitation tasks are used increasingly as a valuable tool for both clinical assessment and research. Sentence imitation has been used to gain insights about linguistic abilities in both typically developing children and children with language impairments (Conti-Ramsden, Botting & Faragher, 2001; Ebert, 2014; Leclercq, Quemart, Magis & Maillart, 2014; Vinther, 2002). Sentence repetition tasks are also reported to contribute to the understanding of underlying mechanisms in processing language. For example, working memory (Devescovi & Caselli, 2007; Stokes, Wong, Fletcher & Leonard, 2006), auditory memory and written memory (Rummer, Schweppe, & Martin, 2013) and memory span (Ebert, 2014). It is reported to play an essential role in the differential diagnosis of developmental language disorders (Devescovi & Caselli, 2007; Leclercq et al., 2014). Sentence repetition tasks have been used to address issues related to limitations in storage capacity or linguistic representations in persons with Specific Language Impairment (SLI). Various researchers (Mainela-Arnold, Evans & Coady, 2010; Mainela-Arnold, Misra, Miller, Poll & Park, 2012; Polisenska, Chiat & Roy, 2015) have used verbal recall tasks and concluded that the storage capacity is inseparable from the linguistic representations in persons with SLI. However, studies using



sentence imitation tasks as a protocol to understand phonological issues is scarce.

Studies comparing imitated tasks (using word or sentences) with spontaneous speech productions have yielded contradictory findings. While few studies have found greater errors in spontaneous speech as opposed to imitated utterances (DuBois & Bernthal, 1978; Faircloth & Faircloth, 1970; Smith & Ainsworth, 1967), others have reported no difference between spontaneous speech productions and imitated speech samples (Paynter & Bumpas, 1977; Siegel, Winitz, & Conkey, 1963). Understanding of a child's speech sound system warrants the use of both standardized, norm referenced measures as well as non-standardized measures. Few standardized assessment tools have used sentence tasks, either spontaneously elicited or imitated. Snyder (2010) demonstrated the advantages of a sentence imitation task over spontaneous speech in understanding the speech sound inventory in children with speech sound disorders. Contrary to the view expressed by a few investigators that connected speech better represents the speech sound errors (DuBois & Bernthal, 1978; Faircloth & Faircloth, 1970; Healy & Madison, 1987; Klein, 1984; Morrison & Shriberg, 1992). Snyder (2010) reported that imitated sentence task provided greater information about the nature of speech sound errors in children. She compared single word identification, connected speech and imitated sentence task in three children with speech sound disorders using independent analyses, relational analysis, phonological error patterns and percentages of consonant correct and observed that imitated sentence task yielded a comprehensive picture of phonological error patterns and percentages of consonants correct followed by single word identification and connected speech. Both single word identification and sentence imitation tasks facilitated the inclusion of all the target speech sounds. Further, sentence task were less time consuming in terms of administration and transcription compared to connected speech thereby adding to the efficiency of the task.

The role of semantic and syntactic aspects in sentence recall is well reported, whereas the contribution of phonological representations has been highly debated. The role of phonological information is widely acknowledged with respect to memory for unrelated lists such as letters, numbers, words, or nonwords (e.g., Conrad & Hull, 1964), but not for related words in the context of a sentence (Alloway, 2007; Potter & Lombardi, 1990). Some of the studies implicate the role of phonological representations in immediate sentence recall in addition to semantic information (Anderson, 1971; Hayes-Roth & Hayes-Roth, 1977; Moeser, 1974; Sachs, 1974). Potter and Lombardi (1990) proposed the 'Conceptual Regeneration Hypothesis' which attributes the process of sentence recall entirely to the semantic, conceptual and lexical identity excluding the phonological domain. Investigations on the relationship between phonological representations and sentence recall by Katz (1998), Rummer and Engelkamp (2001) aided in rejecting the Conceptual Regeneration Hypothesis. Few other studies reported that auditory modality facilitates phonological representations (Rummer & Engelkamp, 2001). Balota, Cowen and Engle (1990) reported that the final

words in a sentence contain greater phonological information compared to the words in the middle of the sentence. Studies on persons with brain damage (Martin, Shelton & Yaffee, 1994; Hanten & Martin, 2000) have provided neuropsychological evidences for phonological contributions to sentence memory. Park (2002) pointed to the role of both semantic and phonological representations in short term recall of sentences. In the experiment by Park (2002), sentences were presented either in rapid serial visual presentation or in the auditory mode with semantically related or both semantically and phonologically related lure words. Results revealed greater intrusions of both semantically and phonologically related lure words than only semantically related lure words in the auditory presentation. Further, encoding of phonological information was found to occur at all positions of a sentence and was maintained until the sentences were recalled. Other studies followed with modified intrusion paradigm of Potter and Lombardi (1990). These studies highlighted the role of phonological representations in short term sentence recall (Eg: Rummer & Engelkamp, 2003; Schweppe, Rummer, Bormann & Martin, 2011). Melby-Lervag and Hulme (2010) reported similar findings based on a vocabulary training program in children.

The role of phonological representations in immediate sentence recall is thus well documented. Most of the studies have derived on the nature of phonological representations based on analysis of articulatory or phonetic errors, phonological processes or in terms of place, voicing and manner (PVM) measures. However, the use of phonotactic analysis as a probable measure to understand the developing phonological representations in children has not been vastly explored. Phonotactic analysis, in terms of various word shapes and syllable shapes, of the imitated samples of children during their developmental years will help delineate the status of the phonological representations and its accessibility in children. Immature or emerging representations in younger children may render the task of producing complex word shapes or syllable shapes difficult resulting in production of simpler forms. It may thus be hypothesized that younger children produce simpler word shapes and syllable shapes compared to their older counterparts. These subtleties may not be characterized in a spontaneous speech task and may be best understood in an imitation task. A sentence imitation task provides an opportunity to analyze imitated utterances with respect to the corresponding target patterns. Further, time constraints in collecting as well as analyzing spontaneous speech productions from young children makes sentence imitation a preferred choice of test, particularly in a clinical situation. With these points of view, this study aimed to understand phonological representations by analyzing and comparing the phonotactic patterns (word shapes and syllable shapes) in typically developing Kannada speaking preschool children aged 3 to 5 years with the corresponding target stimuli.

## **2. Methodology**

### *2.1. Participants*

A total of 80 typically developing children in the age range of 3;0 – 5;0 years were included in the study. All the participants were native speakers of



Kannada residing in an urban environment. They were studying in schools with English as the medium of instruction in the city of Mysore. They were further divided into four subgroups with an inter-age interval of 6 months ( $\geq 3;0$  -  $< 3;6$  years,  $\geq 3;6$  -  $< 4;0$  years,  $\geq 4;0$  -  $< 4;6$  years and  $\geq 4;6$  -  $< 5;0$  years). Each subgroup consisted of 20 participants (10 males & 10 females). Participants with a history of delayed development, sensory issues, behavioral or neurological problems were excluded from the study by administering WHO Ten Questions Disability Screening Checklist (Singhi, Kumar, Malhi & Kumar, 2007). An informed written consent was obtained from caregivers of all the participants before including them in the study. The method conformed to the ethical guidelines outlined by the ethical committee for bio-behavioral research at the institution.

### *2.2. Test stimuli*

All participants were administered the Sentence Imitation Test in Kannada developed by the authors. The test was construed in the following steps:

- a) Initially, 30 sentences were constructed by the principal investigator, considering the spoken vocabulary of preschool children to ensure that they were developmentally appropriate for children in the age range of 3 to 5 years. The Mean Length of utterances for the sentences ranged from 4 to 7 morphemes. An attempt was also made to conform to the frequency of occurrence of phonemes in Kannada while constructing the sentences (Sreedevi, 2012).
- b) These sentences were given to 5 adult native speakers of Kannada for rating on a 3 point scale for familiarity and appropriateness to preschool children as: most familiar, familiar and not familiar. The stimuli rated as most familiar were chosen for the study. A total of 20 sentences were included in the test as target items.
- c) The 20 sentences were audio recorded in a sound treated room where the ambient noise levels were within the permissible limits as per ANSI S3.1-1999 standard (Frank, 2000). The sentences were spoken by an adult female who was a native speaker of Kannada and recorded using Computerized Speech Lab (Kay Elemetrics Corporation, New Jersey) software in a desktop computer. A unidirectional microphone placed at a distance of 6 inches from the mouth was used to record the sentences. The speaker was instructed to utter each sentence three times as naturally as possible in a neutral tone. The recording was digitized at 44,100Hz sampling frequency and was stored in the computer.
- d) The recorded tokens of each sentence were played to 10 adult native Kannada speakers. They were asked to listen to each token and rate the sentence for naturalness on a 3 point scale wherein 1 referred to 'not natural'; 2 referred to 'just natural'; and 3 referred to 'most natural'. One among the three tokens for each sentence that was rated as 'most natural' was selected as the target stimuli.
- e) The target sentences were analyzed for the word shapes and syllable shapes. The 20 sentences selected as target stimuli consisted of 89 words in total with the syllable length distribution as follows: bisyllables = 30; trisyllables = 33 and polysyllables = 26 (4 syllables = 18; 5 syllables = 5; 6

syllables = 2; 7 syllables = 1). In total, the 20 sentences consisted of 275 syllables with the syllable shape distribution as follows: V = 10; VC = 7; CV = 218 and CVC = 40.

### *2.3. Administration of the test*

The test was administered individually on all the participants in a quiet room in the school setting. The audio recorded stimuli were presented to the participants through headphones from a Compaq Laptop using PRAAT software, to ensure good quality and consistency in the presentation of sentences to all participants. In few instances where children refused to wear the headphones, sentences were presented through external speakers. Participants were instructed to repeat the individual sentences as it was heard. Two practice trials were provided to ensure clear understanding of the instructions followed by presentation of test stimuli.

### *2.4. Analyses*

The responses of the participants were recorded using a digital voice recorder (SONY) and were later transcribed verbatim using broad IPA. The transcribed sample was then used to mark the consonants and vowels in the utterances. This was later used to identify various word and syllable shapes.

#### *2.4.1. Analyses of word shapes*

The total number of words produced was noted down for every participant. The transcribed utterances were then classified into various word shapes – bisyllables, trisyllables, four syllables, five syllables, six syllables and seven syllables. Monosyllables, if any, in the imitated sample was noted separately. The frequency of each of the word shapes was tabulated for participants of all the age groups studied.

#### *2.4.2. Analyses of syllable shapes*

Similar to the word shapes, the syllable shapes of each participant were also analyzed. . The total number of syllables produced was noted for every participant followed by classification of various syllable shapes in the sentence utterances such as VC, CV, V and CVC. Presence of additional syllable shapes in the utterance of children, other than those present in the target stimuli, was noted separately.

### *2.5. Interjudge reliability*

To check for interjudge reliability, a qualified Speech Language Pathologist with minimum three years of clinical experience was included. She was asked to transcribe and analyse the imitated samples of 10% of the participants in each age group. The total scores for word and syllable shapes were tabulated for each child. A reliability analysis was carried out for scores of the two investigators and a good interjudge reliability (Cronbach's alpha = 0.9) was established for both word and syllable shapes.

## **3. Findings**

The mean, standard deviation and median for the total scores obtained by participants within and across the age groups for various word shapes and



syllable shapes were computed and are shown in Table 1a and 1b respectively. Shapiro-Wilk’s test of normality revealed that the data was distributed normally ( $p > 0.05$ ) for the word and syllable shapes in all the age groups. However, non-normal distribution ( $p < 0.05$ ) was observed for few of the word shapes and syllable shapes. Hence, parametric and non-parametric statistical analyses were carried out to analyze the data on word and syllable shapes.

Table 1a.

*Mean, Standard Deviation (SD) and Median for various word shapes across age groups*

Word Shapes	Age (in years)							
	≥3;0 - <3;6		≥3;6 - <4;0		≥4;0 - <4;6		≥4;6 - <5;0	
	Mean(SD)	Median	Mean(SD)	Median	Mean(SD)	Median	Mean(SD)	Median
Two syllables	34.50(6.40)	34.50	36.00(5.87)	36.00	34.15(5.29)	34.00	35.15(3.70)	35.00
Three syllables	20.45(5.92)	21.00	25.00(6.08)	25.00	27.75(4.86)	28.00	27.40(4.18)	27.50
Four syllables	13.15(3.18)	14.00	13.45(3.85)	14.00	15.80(3.48)	16.00	17.60(3.03)	17.50
Five syllables	1.65(1.22)	1.50	3.50(2.43)	4.00	3.45(2.06)	3.50	3.35(1.46)	3.50
Six syllables	1.00(1.02)	1.00	0.85(0.87)	1.00	0.85(0.93)	1.00	0.95(0.82)	1.00
Seven syllables	0.00(0.00)	0.00	0.20(0.41)	0.00	0.35(0.48)	0.00	0.60(0.59)	1.00
Total	71.40(11.29)	69.50	79.10(7.67)	81.50	82.50(5.94)	84.00	85.20(3.98)	86.00

Table 1b.

*Mean, Standard Deviation (SD) and Median for various syllable shapes across age groups*

Syllable Shapes	Age (in years)							
	≥3;0 - <3;6		≥3;6 - <4;0		≥4;0 - <4;6		≥4;6 - <5;0	
	Mean(SD)	Median	Mean(SD)	Median	Mean(SD)	Median	Mean(SD)	Median
VC	7.45(1.43)	7.00	7.35(1.18)	7.50	6.55(1.31)	6.50	7.00(1.21)	7.00
CV	147.65(28.23)	143.00	168.65(26.43)	170.00	183.25(22.88)	190.00	193.05(16.24)	195.50
V	10.10(1.97)	10.00	11.30(2.55)	11.00	11.20(2.04)	11.00	11.10(1.07)	11.00
CVC	31.95(5.34)	31.00	36.70(5.12)	37.00	37.95(4.43)	38.50	37.90(2.31)	38.00
Total	197.85(34.35)	192.50	224.90(29.40)	236.50	239.70(23.07)	245.00	249.75(16.18)	253.00

Multivariate Analysis of Variance (MANOVA) was carried out to compare the total scores obtained in word shapes and syllable shapes. The results revealed a significant effect of age [ $F(6, 150) = 6.404, p < 0.01, \text{Wilk's } \Lambda = 0.634$ ]. Subsequent analysis using Univariate ANOVAs revealed a significant effect of age on total scores obtained for both word shapes [ $F(3, 76) = 12.041, p < 0.01, \text{partial } \eta^2 = 0.322$ ] and syllable shapes [ $F(3, 76) = 14.355, p < 0.01, \text{partial } \eta^2 = 0.362$ ]. Post Hoc analysis using Duncan’s homogenous subsets showed that the age group of  $\geq 3;0 - < 3;6$  years was significantly different ( $p <$

0.05) from all other age groups, whereas there were no significant differences ( $p > 0.05$ ) between participants in the age range of  $\geq 3;6 - < 4;0$  and  $\geq 4;0 - < 4;6$  years and between  $\geq 4;0 - < 4;6$  and  $\geq 4;6 - < 5;0$  years for total scores of both word shapes and syllable shapes.

Kruskal Wallis H test was administered to study the effect of age on the various word shapes and syllable shapes. In instances where a significant difference was obtained, pairwise comparisons were carried out using Mann-Whitney U test. The results are presented separately for word shapes and syllable shapes.

### 3.1. Effect of age on word and syllable shapes

#### 3.1.1. Word Shapes

Kruskal Wallis H test revealed significant effect of age on the use of trisyllables ( $\chi^2(3) = 17.361$ ,  $p < 0.05$ ) and polysyllables [four syllables ( $\chi^2(3) = 18.920$ ,  $p < 0.05$ ), five syllables ( $\chi^2(3) = 13.682$ ,  $p < 0.05$ ) and seven syllables ( $\chi^2(3) = 16.377$ ,  $p < 0.05$ )] but not for bisyllables ( $\chi^2(3) = 1.150$ ,  $p > 0.05$ ) and six syllables ( $\chi^2(3) = 0.441$ ,  $p > 0.05$ ). Pairwise comparisons were carried out using Mann-Whitney U test and the results are as given in Table 2. The results showed that participants in the age group of  $\geq 3;0 - < 3;6$  years were significantly different from both  $\geq 4;0 - < 4;6$  years and  $\geq 4;6 - < 5;0$  years for all word shapes. Similarly, there was significant difference between children of  $\geq 3;0 - < 3;6$  years and  $\geq 3;6 - < 4;0$  for all word shapes except for four syllables. There was no significant difference between participants in the age group of  $\geq 3;6 - < 4;0$  years and  $\geq 4;0 - < 4;6$  years and between  $\geq 4;0 - < 4;6$  years and  $\geq 4;6 - < 5;0$  years for any of the word shapes whereas significant differences were observed between children in the age range of  $\geq 3;6 - < 4;0$  years and  $\geq 4;6 - < 5;0$  years for four and seven syllables.

On combining the scores of four, five, six and seven syllables to compare polysyllables in general, results of Kruskal Wallis H test revealed significant age effect ( $\chi^2(3) = 23.478$ ,  $p < 0.05$ ). Pairwise comparisons using Mann-Whitney U test revealed significant differences between all age groups ( $p < 0.05$ ) except between  $\geq 4;0 - < 4;6$  and  $\geq 4;6 - < 5;0$  years and between  $\geq 3;6 - < 4;0$  and  $\geq 4;0 - < 4;6$  years.

Table 2.

*Results of pairwise comparisons for age groups using Mann-Whitney U test (Only those word and syllable shapes significantly different ( $p < 0.05$ ) across age groups are depicted)*

Age (in years)	$\geq 3;0 - < 3;6$		$\geq 3;6 - < 4;0$		$\geq 4;0 - < 4;6$		$\geq 4;6 - < 5;0$	
	WS	SS	WS	SS	WS	SS	WS	SS
$\geq 3;0 - < 3;6$	-	-	3, 5, 7 syllables	CV, CVC	3, 4, 5, 7 syllables	CV, CVC	3, 4, 5, 7 syllables	CV, CVC
$\geq 3;6 - < 4;0$	-	-	-	-	NS	NS	4, 7 syllables	CV
$\geq 4;0 - < 4;6$	-	-	-	-	-	-	NS	NS
$\geq 4;6 - < 5;0$	-	-	-	-	-	-	-	-

Note: WS- Word Shape, SS- Syllable Shape, NS- Not Significant



### 3.1.2. Syllable shapes

A significant effect of age was found for CV ( $\chi^2(3) = 27.540$ ,  $p < 0.05$ ) and CVC ( $\chi^2(3) = 16.046$ ,  $p < 0.05$ ) but not for VC ( $\chi^2(3) = 5.134$ ,  $p > 0.05$ ) and V ( $\chi^2(3) = 5.135$ ,  $p > 0.05$ ). Pairwise comparisons using Mann-Whitney U test (see Table 2) revealed that participants in the age group of  $>3;0 - \leq 3;6$  years were significantly different from all other age groups for both CV and CVC syllable shapes. There was no significant difference between participants in the age group of  $\geq 3;6 - < 4;0$  years and  $\geq 4;0 - < 4;6$  years and between  $\geq 4;0 - < 4;6$  and  $\geq 4;6 - < 5;0$  years for any of the syllable shapes whereas significant differences were observed between children in the age range of  $\geq 3;6 - < 4;0$  years and  $\geq 4;6 - < 5;0$  years for CV but not for CVC.

### 3.2. Proportions of Word and Syllable Shapes

The proportion of each of the word shapes and syllable shapes produced by participants of all age groups was also compared with the corresponding target values calculated from the sentence stimuli. The proportion of each word shape was calculated for each participant using the formula

$$\frac{\text{Number of (word shape) produced}}{\text{Total number of words produced}} \times 100$$

Similarly, the proportion of each syllable shape was calculated for each participant using the formula

$$\frac{\text{Number of (syllable shape) produced}}{\text{Total number of syllables produced}} \times 100$$

As the data distribution was non-normal and the standard deviation was found to be high for one of the variables, non-parametric test was applied to compare the proportions of each word shape and syllable shape in each age group with the corresponding target proportions. Results of sign test for single samples revealed that in the age group of  $\geq 4;6 - < 5;0$  years, there was significant difference ( $p < 0.05$ ) for VC and CVC among the syllable shapes whereas bisyllables, trisyllables and five syllables were found to significantly ( $p < 0.05$ ) vary from the corresponding targets among the word shapes. Similarly, there was significant difference ( $p < 0.05$ ) for CV and V among the syllable shapes whereas bisyllables, trisyllables and six syllables were found to significantly ( $p < 0.05$ ) vary from the corresponding targets among the word shapes in the age group of  $\geq 4;0 - < 4;6$  years. There was significant difference ( $p < 0.05$ ) for all the syllable shapes and word shapes when compared to the corresponding targets for the age groups of  $3;0 - < 3;6$  years and  $3;6 - < 4;0$  years except for four syllables (in  $\geq 3;0 - < 3;6$  years) and five syllables (in  $\geq 3;6 - < 4;0$  years) where the proportions did not vary significantly from the targets ( $p > 0.05$ ).

The proportions of word shapes and syllable shapes produced by participants across age groups are depicted in Figures 1 and 2 respectively. It may be observed that the proportion of bisyllables produced was considerably higher than the target in all the age groups. The increase in proportion was more pronounced in the younger age groups compared to the higher age groups. On combining the four, five, six and seven syllables to

obtain the proportion of polysyllables in general, results of sign test showed significant differences ( $p < 0.05$ ) in each of the age groups i.e the proportion of polysyllables varied significantly from the target value.

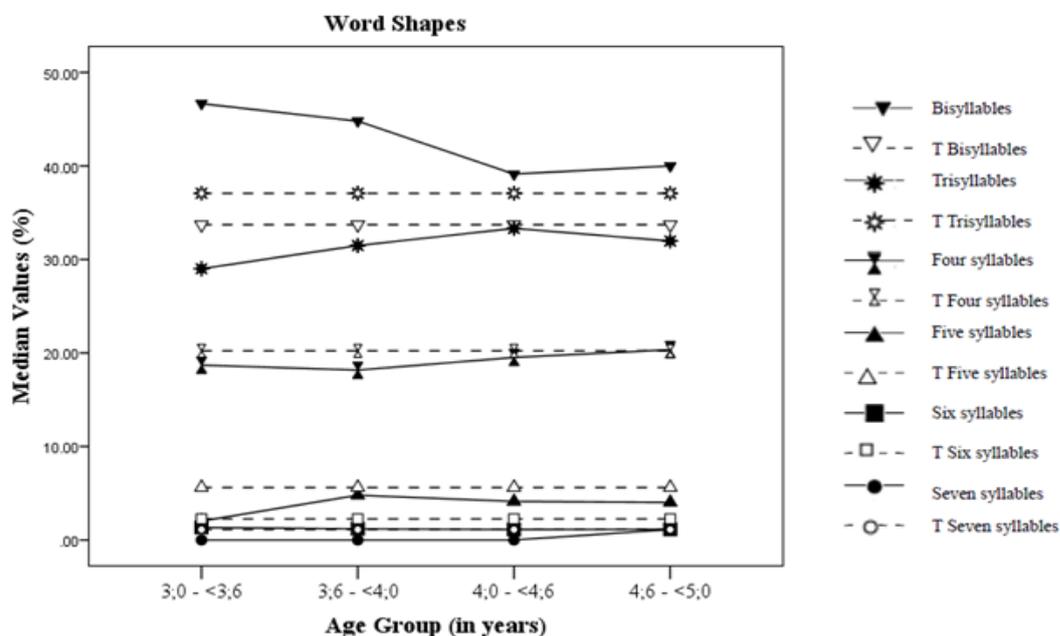


Figure 1. Proportions of various word shapes produced by participants with respect to their corresponding target values (Note: T = Target)

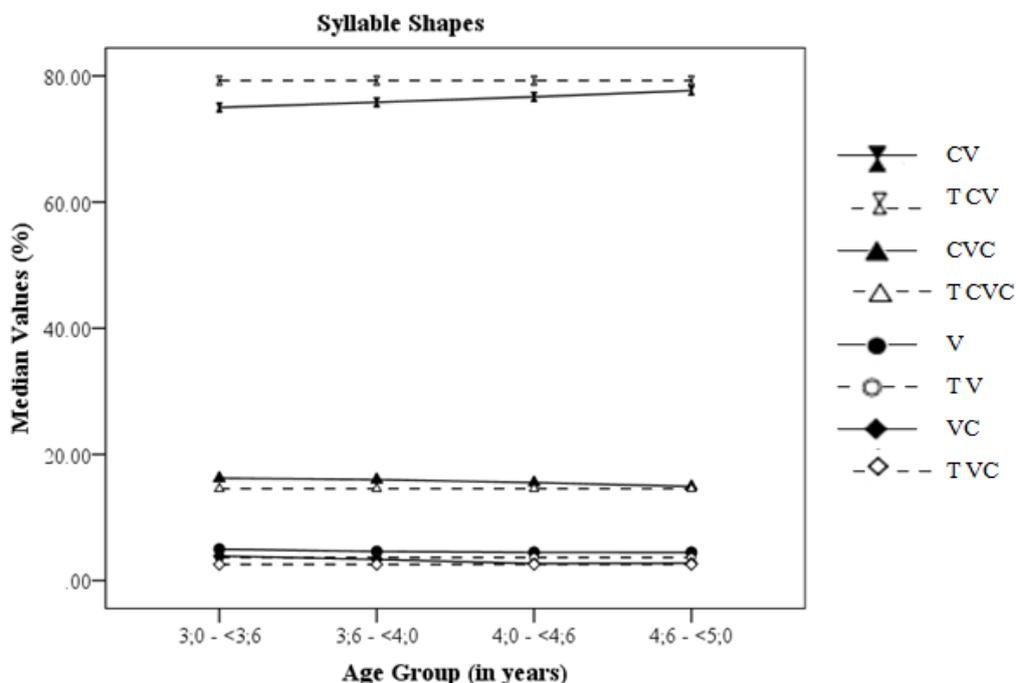


Figure 2. Proportions of various syllable shapes produced by participants with respect to their corresponding target values (Note: T = Target)

The subjective analyses of the data revealed evidence for both primacy and recency effect, particularly in the younger age groups i.e.  $\geq 3;0 - < 3;6$  years and  $\geq 3;6 - < 4;0$  years. Participants in these age groups either displayed a



tendency to repeat only the initial portion of a sentence or the last words. Predominance of bisyllables and CV structures were observed in all the age groups. In addition to the target word shapes and syllable shapes, there were instances of additional varieties produced by the participants. For example, children produced monosyllables occasionally either when an equivalent word form in the target sentence was produced in English or when a bisyllable was reduced to a monosyllable. Similarly, syllable shapes other than those present in the target sentences were found in the imitated samples of participants, e.g.: CVCC, VCC, CCV. Lexical semantic substitutions in the form of replacing a target word in a sentence by another meaningful word while maintaining the syntactic integrity of the sentences were also observed. Such substitutions were found to occur in both Kannada and English languages occasionally. For example: Substitution of the word 'ba:lehaṇṇu' (banana) for 'ma:vinahaṇṇu' (mango) or substitution of the English word 'mango' by a child in response to the corresponding Kannada equivalent 'ma:vinahaṇṇu' in the target sentence.

#### **4. Discussion**

Results revealed a significant effect of age on the total scores obtained on word shapes and syllable shapes, thereby supporting a developmental trend in the phonotactic abilities of children. These findings are in consonance with that of Rupela and Manjula (2006) who reported a similar finding in native speakers of Kannada based on a study on 0-5 year old participants. These authors had analyzed conversation samples whereas results of the present study are based on a sentence imitation task. Thus, sentence imitation may be considered to be a useful task in the assessment of phonotactic abilities in preschool children, thereby helping gain insights about their phonological representations.

It was also found that children in the age group of  $\geq 3;0$  -  $< 3;6$  years were significantly different from all the other groups of participants considered in the study. This was true for all the words shapes and the syllable shapes targeted in the sentences. It may thus be assumed that after 3.6 years of age, children begin to gain mastery over most of the word shapes and syllable shapes that the phonotactic rules of Kannada language would permit.

With respect to the word shapes, a significant effect of age was observed for trisyllables and polysyllables (with the exception of six syllables) but not for bisyllables. A detailed analysis of the imitated utterances showed that the higher order word shapes were reduced to simpler forms, the most common one in Kannada being the bisyllables. Hence, younger children were observed to reduce the tri and polysyllabic structures to bisyllables in their imitated utterances owing to the ease of production of bisyllables. This might reflect the possibility of inadequate phonological representations in young children or an inadequate access to the phonological representation due to which retention of word shapes of the target sentences were rendered difficult.

On the other hand, the effect of age was significant on the syllable structures CV and CVC but not on V and VC. The lower occurrences of V and VC in Kannada language compared to CV and CVC and consequently in the target sentence task might have led to the lack of age effect for these syllable structures. The frequency of occurrence of V in typically developing Kannada speaking children was reported to be very low (Rupela & Manjula, 2006). The results of the present study support the same findings.

Although there was a decrease in the overall scores obtained by the participants of the younger age groups for most of the word shapes and syllable shapes, the proportion of the various word and syllable shapes remained similar to the higher age group. Children in the younger age groups were able to use polysyllables (including five, six and seven syllables) in their imitated utterances, although the frequency was lesser compared to higher age groups considered in the study. Further, the proportion of bisyllables in the imitated samples exceeded the target of bisyllables in the sentences for all the age groups, particularly the younger age groups. These findings support the notion that the phonological representations for words of increased length are not completely developed in children upto the age of 5 years. Similarly, an increase in the occurrence of CV syllables is likely to have reduced the frequency of occurrence of VC and CVC syllables in participants of all age groups given the known fact that CV syllables are the most commonly and frequently occurring syllable shape in Kannada. It may be plausible that the phonological representations as well as the access to the same may be strongly developed for the frequently occurring syllable shapes in the language concerned while the representations for other shapes may still be in the process of development. Overall, the results of the present study implicate a role of phonological representations in sentence imitation task in typically developing preschoolers. These findings may be taken as a support for other studies in the literature supporting the contribution of phonological representations in sentence recall (Melby-Lervag & Hulme, 2010; Park, 2002; Rummer & Engelkamp, 2003; Schweppe, Rummer, Bormann & Martin, 2011) while rejecting the Conceptual Regeneration Hypothesis (Potter & Lombardi, 1990). Although the method of analysis used in the current study varied from the reported studies, the developmental trend observed in phonotactic patterns and thereby the phonological representations in children substantiate its role in sentence imitation.

There were few English words used which were equivalent in meaning to the targets in Kannada during the sentence imitation task. This underlines the role of semantic representations in immediate sentence recall. This finding draws support from other studies in the literature which report of involvement of semantic and phonological representations in short term sentence recall (Anderson, 1971; Hayes-Roth & Hayes-Roth, 1977; Moeser, 1974; Park, 2002). Such semantic substitutions may be the result of poor phonological representations of the target words. It is also possible that the participants had poor access to the phonological representations of those targets and thus attempted to complete the sentence by substituting an equivalent alternate while at the same time maintaining the syntactic structure of the targets. Similarly, use of alternate words in English may be attributed to the bilingual exposure of the participants of the study i.e. they



were native speakers of Kannada studying in schools with English as the medium of instruction. Such substitutions occasionally resulted in the production of monosyllables which are otherwise rare in Kannada language (Hiremath, 1980).

## **5. Conclusions**

The results support the developmental trend seen in the phonotactic patterns in typical children, and thereby the phonological representations. It also adds to the existing body of literature supporting the role of phonological representations in sentence imitation task. Phonotactic analysis in terms of various word and syllable shapes of the imitated utterances can provide an insight into the phonological representations in children. Further, given the clinical utility of a sentence imitation task with respect to its short administration time and ease of analysis compared to that of spontaneous speech productions, it can be considered as an indispensable part of the assessment battery for speech sound disorders in young children. Replication of the study on children with developmental disorders like Phonological disorder, Specific Language Impairment, Childhood Apraxia of Speech etc can help substantiate the relevance of the findings of the present study.

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## **Sentence repetition in typically developing children: A preliminary Study**

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### **Abstract**

The process of language evaluation in preschool paediatric population is the driving force to study and analyze various stages of language acquisition. A material for evaluating language is needed that is quick to administer, context-sensitive and that helps in exploring specific aspects of language. A sentence repetition task provides an examiner with a quick, context-sensitive way of examining a typically developing child's language processes, specifically syntactic, semantic and morphosyntactic capabilities. This study explores the performance of Tamil speaking typically developing children aged 3;6 years to 5;0 years of age on a sentence repetition task. The test items were 32 sentences constructed in colloquial Tamil which incorporated the language's morphosyntactic components including tense markers and case markers. The children were instructed to listen carefully and repeat the sentences. The results indicated that there were no significant errors made in the age range of 3;6 to 5;0 years. A significant difference was seen in the categories of sentences used, with increased errors in sentences involving morphosyntactic markers. Thus, sentence repetition can precisely identify and provide qualitative information on the specific language structure of interest.

**Keywords:** language assessment, language development, sentence repetition, morphosyntactic markers, Tamil

### **1. Introduction**

This study is the first effort to study and analyze the sentence repetition in Tamil, which is one of the oldest Dravidian languages of India. The sentence repetition task was administered on typically developing children between three and a half and five years of age using various sentence types and morphological markers. It also analyses repetition performance in these children and compares performance among different age groups and between genders. This effort is significant because language acquisition is often

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studied by observing the child in structured as well as naturalistic contexts and through interactions. Spontaneous tasks helps in evaluating the language use with respect to context and demands of speaker. However, several authors have suggested that spontaneous tasks tend to overestimate or underestimate the child's use of various structures.

Structured measures such as narration or picture description may be used to assess different aspects of language. These allow the experimenter to understand language processing and the range of possible outcomes. A task must be able to analyze and control the factors involved. Responses obtained from children indicate the way the task breaks down for a specific target. Despite several advantages this method, these tasks are dependent on prior experience of the child and representativeness of the picture for description. Sentence repetition is one another method to evaluate children's language abilities. Bernthal & Fischer (1978) were among the first researchers to ask children to imitate a model in order to assess various cognitive abilities, including language. However, sentence repetition requires more than just auditory memory (specifically short-term memory). Subsequent trends have also suggested that children require language competence, and the errors they make reflect their level of competence. The model sentence imitation process suggested by Mc Dade, Simpson & Lamb in 1982 is suggestive of this idea. In a more recent model suggested by Potter and Lombardi (1998), "sentence reading or hearing not only conveys a message and activates the lexical items; it also primes syntactic structures when expressing the message".

In summary, the literature suggests that, during sentence repetition task individuals restructure the stimulus from the content in their long-term memory as well as from lexical, theoretical and syntactic representations. Also, it can be inferred from these studies that when an individual repeats the utterance which is longer than his or her usual word span, they use the syntactic knowledge to "chunk" the words which is represented in the long term memory.

Sentence repetition offers several advantages as an assessment tool. It is a natural skill requiring relatively little concentration or effort. From early stages most children readily repeat and participate in repetition tasks. They are less reliant on experiences of language than other methods of language assessments. Socio-economic status, gender and nonverbal IQ do not significantly associate with the findings (Seef-Gabriel, Chiatand Roy, 2010). Carefully selected targets with a limited range of items can yield a good amount of information. Children's errors in sentence recall can be highly informative about their morphosyntactic, syntactic and semantic difficulties. In children with unintelligible speech, scoring of responses will become easy when the targets are known. If the tests are standardised, we can determine whether a child's overall recall is in par with children of that age.

Sentence imitation's role in language acquisition has been emphasized since 1920s. Jaspen (1922) as cited in Corrigan (1982) emphasized the behavioural importance of the fact that children echo what is said to them, and that this contributes to language acquisition and hence may be useful for testing purposes. In a study by Devescovi and Caselli in 2007, sentence repetition was measured in three age ranges to study the grammatical



development. The results of that study revealed sentence repetition as a powerful tool that could discriminate between groups and that could reveal grammatical development. Sentence repetition has not only focused on developmental stages; it also has been used to study other language structures and to understand them in relation to theoretical frameworks.

Sentence imitation method was utilized to study various language forms, such as coordinate conjunctions (Lust, 1977) and semantic relations (Corrigan, 1982) to name a few. Sentence imitation performance is influenced by the morphosyntactic elements where children tend to omit the functional markers; thus sentence imitation can effectively discriminate these errors in language impaired children. It served as an appropriate tool in studying the production of various language structures in the exact manner. Thus, sentence imitation serves as a useful method in testing children with language delay.

Given the sensitivity of sentence repetition to syntax, it has been used to understand the competence of typically developing children in the syntactic categories. Sentence repetition is used in several western test batteries for evaluating language in preschool age children, and children whose language skills are developing. The recall subtest in CELF (Clinical Evaluation of Language Fundamentals; Elisabeth, Eleanor & Wayne, 2013) is widely used in research and clinical purpose. The TOLD-P: 3 (Test of Language Development - Primary, 3rd edition) by Newcomer & Hammill (2008) is yet another test that has a sentence imitation subtest.

The Early Repetition Battery (Seeff-Gabriel Chiat & Roy, 2008) is an important tool with two repetition tasks: i) The Preschool Repetition Test and ii) Sentence Imitation Test (SIT). They are standardised tools, and the sentence imitation subtests comprises of a set of sentences of various lengths, morphosyntactic components, with language specific representations in various sentence types and inflexions. A valid score was given only when the entire sentence was repeated correctly. Thus, the scores obtained from both these tests will determine if a child exhibits any problem in imitation and it is further matched with his or her peers who are typically developing. Some researchers have expressed concern regarding the usefulness of imitation as opposed to spontaneous production; however, there is now a general consensus that the sentence repetition provides a window onto the child's language competence (Ratner, 2000). Its advantage as a method for assessing children's morphosyntactic abilities is to obtain a range of carefully selected targets in a more systematic way than the spontaneous production.

The value of sentence repetition has been established in other languages including Italian and Dutch which was found to be valid and reliable in tracking the morphosyntactic development in preschoolers (Devescovi and Caselli, 2007). Various studies in the recent past have concluded that sentence repetition skills help in identifying language issues in children. These studies also highlight that language specific features need to be incorporated, that suit the language of testing. Western test batteries may not capture the structural characteristics of Tamil language. Vaidyanathan (1988, 1991) has traced the development of interrogatives and negatives in

two Tamil speaking children longitudinally starting from 0;9 months to terminating at 3;0 years. He observed that a definite developmental sequel in both cases. Lakshmanan (2000) in a cross sectional study of development of relative clause construction in Tamil children from 2;1 to 6;6 years and observed that children below 5;0 years relativised significantly less often than older children. This implies that the focus on the sentence types and syntax development has been very scarce and requires more research in these lines.

### *1.1. Need for the study*

There is growing interest in developing language test materials in Indian context. The Indian languages have several linguistic families, the most larger section is the Indo-European languages, Indo-Aryan which is spoken by 72% of Indians and the Dravidian languages being used by 25% of Indians. There are a few test materials that have been developed in Indian languages like, Screening test for development of syntax in Kannada (Vijayalakshmi, 1981) , Linguistic Profile Test (Suchithra & Karanth, 1990) to name a few. However there has been no documented test in Tamil and sentence repetition task has not been done in any of the Indian languages. There are test materials like CELF's recall subtest and the Early Repetition Battery based on the sentence repetition in Western normative, and these materials cannot be directly used in the Indian context. Hence, test materials are needed that cater to the language and address all the unique aspects of the language; this paper proposes to address this need.

### *1.2. Aim of the study*

The study aimed at determining the sentence repetition performance in typically developing Tamil children between 3;6 to 5;0 years of age in various sentence types and morphological markers. The study also looked into the differences in performance if any between boys and girls in sentence repetition task.

## **2. Methodology**

### *2.1. Participants and inclusion criteria*

The sample set included 120 children, from a primary school in west Chennai, with the necessary permission from the school principal in place. All children within the age range of 3; 6 to 5; 0 years whose first language was Tamil were considered for this study. An informed consent was obtained from all parents of these children before data collection. A detailed language evaluation was carried out using Extended Receptive Expressive Emergent Language Test-3 (E REEL-3), Bzoch, League, & Brown (2003). Due to unavailability of a standardised test material in Tamil, an adapted version of E - REELS was used. An informal hearing screening was done to rule out hearing loss. Those children who had typical language development and hearing sensitivity within normal limits were only considered. The children were grouped into A, B and C with the mean age of 3;7 years, 4;3 years and 4;8 years, respectively. Each group had 20 boys and 20 girls.



Table 1

*Demographic details*

Sl. No	Participants	Number	Mean age
1	Group A	40	3;7
2	Group B	40	4;3
3	Group C	40	4;8

*2.2. Test material construction*

The test items were constructed in colloquial Tamil representative of the children's speaking language. Thirty-two sentences were developed that represent various sentence types incorporating morphosyntactic components in Tamil. Simple words that were within the vocabulary range of children for their age were used in these sentences. The following sentence categories were used to form the test items: (Appendix1)

1. Declaratives
2. Subjectless sentences
3. Sentences in which nouns have different case markers
4. Sentences in which verbs have different tense, gender and number markers
5. Negatives sentences
6. Co-ordinate sentences
7. Comparative sentences
8. Conditional sentences
9. Passive sentences

*3. Data collection*

The data were collected individually in a relatively quiet room at the school. Prior to the testing procedure, social rapport was established with the children in groups. Live voice was used for eliciting responses to maintain motivation and for participation in the task. Audio recording of the sample was done using a Samsung M202i recorder with unidirectional microphone. The sentences were presented in a predetermined order. The children were instructed to listen carefully and repeat the sentences. If a child was not able to repeat the sentence item, a second chance was given. If not able to repeat on the second chance, then the sentence item was abandoned and sentence was scored with maximum error. Each recording took approximately about 10 minutes. When any child did not show much interest or was tired, the testing was stopped and they were tested later.

*3.1. Scoring*

The children's responses was analysed and scored as correct and incorrect using the scoring protocol that ranged from 1-4, where 1 is completely correct, 2 is marker substitution, 3 is marker/word omission and 4 is incomplete/non-meaningful word addition.

### 3.2. Analysis

Verbatim transcriptions of childrens' responses were made and the responses were analysed based on the scoring from 1 to 4. The sentences were coded by two Speech and Language Pathologists (SLPs). The inter-rater reliability was calculated for all 120 samples. The agreement between two SLPs was 95% for correct repetition and 92% for errors in repetition. The following statistical analysis were carried out. Difference in performance across the three groups A, B and C was analysed using ANOVA. Gender difference was analysed using T test across single mean and comparison of sentence categories and individuals test items were carried out using Friedman's test.

## 4. Results and Discussion

### 4.1. Performance differences between groups

Groups A, B and C were compared for performance differences in the repetition task. Each group constituted of 40 children. Table 2 shows the mean and standard deviation for errored scores in sentence repetition task across different groups A, B and C for various sentence types.

Table 2  
*Performance of sentence repetition in 3 groups*

	Group A (n=40)		Group B (n=40)		Group C (n=40)		P
	Mean	SD	Mean	SD	Mean	SD	
Statements	3.50	0.91	3.23	0.48	3.55	1.13	0.211
Subjectless sentences	5.20	0.72	5.20	0.61	5.13	0.56	0.831
Sentences with case markers	10.77	3.19	9.60	2.44	8.28	2.05	0.187
Tense markers	7.33	0.86	7.33	0.94	7.00	0.00	0.079
Negatives	3.10	0.44	3.08	0.27	3.00	0.00	0.298
Co-ordinates	1.08	0.35	1.05	0.32	1.00	0.00	0.458
Comparatives	1.08	0.47	1.00	.00	1.00	0.00	0.371
Conditional	1.08	0.47	1.05	0.32	1.00	0.00	0.585
Passive constructions	3.25	0.78	3.00	0.00	3.00	0.00	0.018
Overall errors	35.92	5.81	34.53	3.66	33.95	2.90	0.112

\*p< 0.01 is considered significant

Comparing the three groups, there is no significant difference ( $p>0.01$ ) exhibited by these children among the different sentence types. However the younger group (Group A) had a tendency to perform poorer in all the sentence types. The age groups considered in this study were between 3;6 to

5;0 years and literature reveals that the mastery of the different sentence forms takes place within the age range, hence a lack of significant difference between the groups could be attributed to the same.

The youngest group considered in this study demonstrated a higher mean value indicative of more errors in the repetition performance. These results are in par with the previous data on spontaneous repetition. Also, the results correlate Brown's (1973) assumption that "in the early stages of development language is characterized by the presence of content words and consequently has few function words (articles, prepositions, pronouns) to extend both the length and the meaning of a sentence". The current study is also in agreement with studies published in other languages done by Devenscovi & Caselli 2007, Cipriani et al. 1993, Leonard et al. 1992 in Italian, where children are reported to be capable of expressing various grammatical structures by the age of 3;0 years.

#### 4.2. Gender difference across different sentence types

The difference in gender for repetition task was evaluated, where equal number of boys and girls were included in the study. It was found that there is no significant difference ( $p > 0.001$ ) between the gender in terms of performance across the sentence types as indicated in figure 1. This result is in agreement with the previous published research by Seeff-Gabriel, Chiat & Roy, 2008.

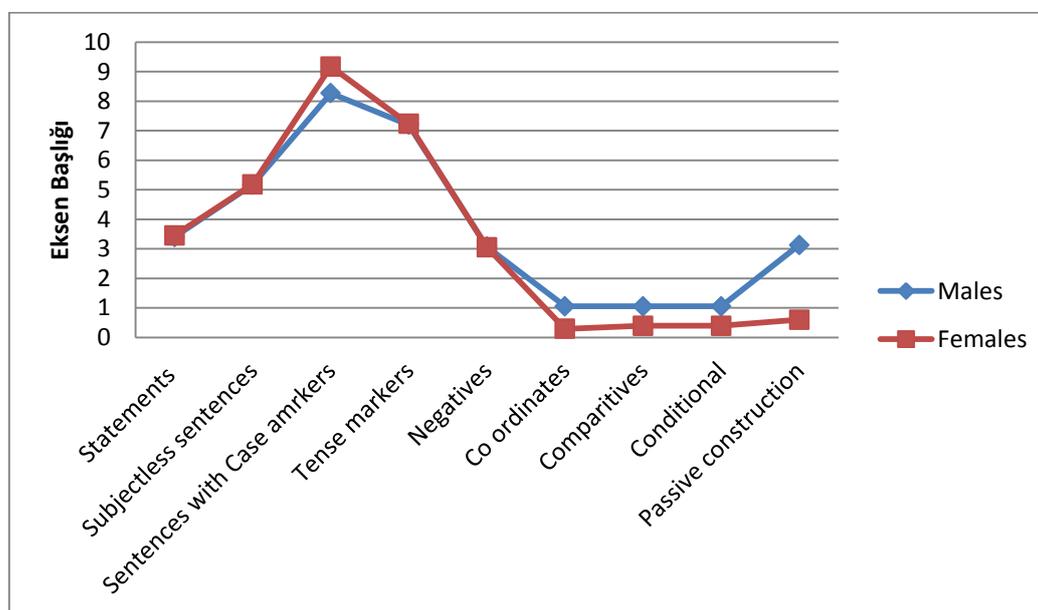


Figure 1 Gender difference across sentence types

#### 4.3. Difference in overall sentences categories

The sentences constructed for the purpose of repetition task were based on the different sentence types and morphosyntactic components. These sentences were analyzed according to errors in various categories.

Table 3

*Friedman's test for significant difference of sentence types*

Sentence types	Mean rank	Chi square value	<i>P</i> value
Statements	5.63		
Subject less sentences	4.83		
Sentence with case markers	6.58		
Tense markers	4.84		
Negatives	4.70	228.904	0.000*
Co-ordinates	4.65		
Comparatives	4.55		
Conditional	4.58		
Passive constructions	4.65		

\* $p < 0.001$ - significant

The table above indicates that Friedman's test for comparing the difference in errors between the sentence types, which demonstrate a significant difference. It points to the fact that sentences with case markers received the highest scores, followed by statements and sentences with tense markers. The results indicated a significant difference in the errors amongst the sentence categories. It is seen that sentences with case markers received the first mean ranking, indicating that children make maximum errors in this sentence type. In agreement with the different sentence type acquisition, it is seen that case markers are often the ones that are acquired later so the maximum errors may be because the children might still be in the developmental stage. The next mean rank was obtained for statements. In Tamil, certain structures are elliptical and demonstrative pronoun is not a requisite, hence the errors in this category of sentences could be attributed to this feature.

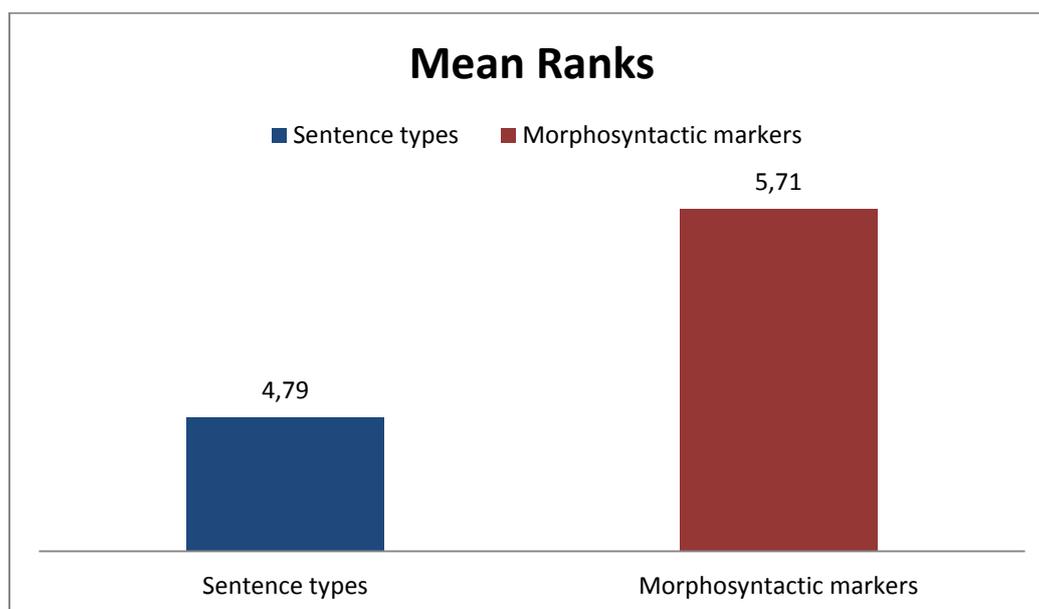


Figure 2 Mean ranks for sentence types and morphosyntactic markers

In addition to the above findings, Figure 2 shows that sentences with morphosyntactic components had more errors across the age groups. The mean ranks for the sentences with morphosyntactic elements were higher compared to the other sentence types. This is concurrent with the study done by Seeff-Gabriel, Chiat & Roy (2008) where it was observed that sentence repetition tasks were sensitive to morphosyntactic errors not only in typically developing children but also in disordered populations.

#### 4.4. Comparison of sentence errors through mean rank ordering

The 32 sentences were compared for the errors and the mean ranks were calculated using Friedman's test for significance. A significant difference ( $p < 0.01$ ) was obtained within the sentence categories. It is observed that sentence number 11 received the maximum error ranking, followed by sentences 9 and 1. It is interesting to note that sentence number 10, had lesser errors given its complexity (the sentence has direct and indirect object in the sentence structure) it may be owing to the personal reliability of the sentence (use of familial relation viz mother and brother) The sentences with the case markers (11, 9) and statement sentence (1) received maximum error scoring through mean ranks. It is postulated that the errors in the sentences may be because of the complex construction and nature of the language. In addition to the above, the role of working memory and attention cannot be underestimated.

### 5. Conclusion

The study was undertaken to understand sentence repetition in various sentence types and morphosyntactic markers. Thirty two sentences were constructed for this purpose. The results of the study indicate that in the age range of 3;6 to 5;0 there was no significant errors that were made, and there were no significant difference between the groups. Gender difference was not

significant. A significant difference was seen for within the category of sentences used, more errors pointing towards the sentences involving morphosyntactic markers. If the tests are standardised, we can determine whether a child's overall recall is in par with children of their own age. In conclusion it can be stated that sentence repetition could be very precise on identifying the specific structure of language of interest (e.g. morphosyntax) and provide qualitative views on the same.

## 6. Implications

It would be interesting to investigate the different grammatical aspects using both spontaneous as well as imitative responses and comparing the performances. A detailed format could be designed to analyze the complex sentences. This could further help clinicians to analyse the errors in children and in adult with language difficulties. It would be beneficial to develop age specific norms that could be used in clinical co relation with disordered population. It would be interesting to study the working memory and the sentence repetition in children, so that the performance can be effectively attributed. Further research on building up a detailed analysis and exploring various aspects can be done.

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**Appendices**

## Appendix 1

Tamil Sentences in International  
Phonetic Alphabet (IPA)

1. idu na:j
2. na: pajan
3. nalla tatta~
4. na:ja aditta:~
5. na:ja aditte:~
6. na:ja adippa:~
7. na:ja adikkira:~
8. ra:m na:jaadit ta:~
9. lakmi na:jkku kudutta~
10. amma: tambikku bisket kudutta:nga
11. ra:m elija kamba:la aditta:~
12. si:ta suda:vo:da sa:pta:
13. pajan ku:daile:ndu edutta: ~
14. ma:la: padijile:ndu viunda:
15. idu akka:vo:da kannadi
16. barat tu:nguva:~
17. vi:na: tu:ngitta:
18. tambi padippa:~
19. li:la: o:dina:
20. pajan viunda:~
21. pajan aditta:~
22. tambi totta:~
23. appa: tu:ngala
24. anna tu:ngama:tta
25. amma:vu tambiju po:rannga
26. pajana:la o:da mudija:du
27. pu:nnaijo:da na:j perusu
28. kuitta:tatta po:ttukala:~
29. na:j addikka pattadu
30. na:jkku tarappattadu
31. kamba:la adikkapattadu
32. ra:m itli sa:pta:~

## English Translation of Tamil sentences:

1. This is dog
2. I am a boy
3. Nice shirt
4. He hit the dog
5. I hit the dog
6. He will hit the dog
7. He is hitting the dog
8. Ram hit the dog
9. Lakshmi gave it to the dog
10. Mom gave the biscuit to the brother
11. Ram hit the rat with a stick
12. Sita ate along with sudha
13. The boy picked it up from the basket
14. Mala fell from the stairs
15. This is sisters glasses
16. Bharath will sleep
17. Vina has slept
18. Brother will study
19. Lila ran
20. Boy fell
21. Boy hit
22. Younger brother touched
23. Father dint sleep
24. Elder brother wont sleep
25. Mom and younger borther are going
26. Boy could not run
27. Dog is bigger than cat
28. She is taking her
29. The dog was beaten
30. The dog was given
31. It was beten with a cane
32. Ram ate idly.