EMPIRICAL OBSERVATION ON GRAMMATICAL AND LEXICAL DEVELOPMENT BY STORY RETELLING TASK IN PRIMARY SCHOOL CHILDREN

ANJU R

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Mysuru

ALL INDIA INSTITUTE OF SPEECH AND HEARING

MANASAGANGOTHRI, MYSURU—570 006

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CERTIFICATE

This is to certify that this dissertation entitled— "**Empirical Observation on Grammatical and Lexical Development by Story Retelling Task in Primary School Children**" is a bonafide work submitted in part fulfillment for degree of Master of Science (Speech-Language Pathology) of the student Registration Number: 18SLP002. This has been carried out under the guidance of a faculty of this institute and has not been submitted earlier to any other University for award of any other Diploma or Degree. Mysuru

Mysuru
July 2020

Dr. M. Puspavathi
Director
All India Institute of Speech and Hearing
Manasagangotri, Mysuru -570006

CERTIFICATE

This is to certify that this dissertation entitled— "**Empirical Observation on Grammatical and Lexical Development by Story Retelling Task in Primary School Children**" has been prepared under my supervision and guidance. It is also being certified that this dissertation has not been submitted earlier to any other University for the award of any other Diploma or Degree.

Mysuru
July 2020

Guide
Dr.S.Venkatesan
Professor
Department of Clinical Psychology
All India Institute of Speech and Hearing
Manasagangotri, Mysuru-570006

Co-Guide
Dr. R. Rajasudhakar
Reader
Department of Speech-Language Science
All India Institute of Speech and Hearing
Manasagangotri, Mysuru-570006

DECLARATION

This is to certify that this dissertation entitled —"**Empirical Observation on Grammatical and Lexical Development by Story Retelling Task in Primary School Children**" is the result of my own study under the guidance of Dr.S.Venkatesan, Professor, Department of Clinical Psychology All India Institute of Speech and Hearing, Manasagangotri, Mysuru-570006 and co-guided by Dr. R. Rajasudhakar, Reader, Department of Speech-Language Science, All India Institute of Speech and Hearing, Manasagangotri, Mysuru-570006 and has not been submitted earlier to any other University for award of any other Diploma or Degree.

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CHAPTER 1

Introduction

Narration is the act of telling or writing stories. Narratives serve as a rich source of knowledge about linguistic and pragmatic knowledge. Oral descriptions are a rich source of data that is used to fill children's language use in a real environment. Narration can be the sequencing of factual events or imaginary stories. Among these two types, imaginary holds more importance in later academic and literacy development (Catts et al., 2003). The increased attention for imaginary stories is because there is a need for children to comprehend and reproduce fictional stories in the academic environment. Event narratives also have a significant role in their social and psychological comfort. Personnel narratives can be mainly of two types they are event narratives and integrated life narratives. Event narratives are a description of particular personally related events. On the other hand, integrated life narration is the threading of different happenings that happened in a period.

Types of narration

According to Hedberg and Westby (1993), there are various types of narratives.

1. Script: To explain the familiar event or recurring event, this type of narration is used. This type of narrative involves the use of a second-person pronoun to describe the event in the present tense.
2. Recounts: This involves recapping the personnel experience/ event with a prompt in the past tense.

3. Accounts: The self-promoted narration of personnel experience, which is not shared with the listener.
4. Event casts: These are explanations about a real scene, or speaking about plans.

Development of narration

Narrative skills emerge by the second or third year of life in children. The development of these skills in children allows them to understand the meaning of experiences in life as well as to organize and interpret them. However, the initial story description will be done with the assistance of elders, supported by prompts and questions from others. And also, the content selected by the children will be different with age. Children around two years usually choose topics in family, and they narrate about eating, sleeping, crying, etc. As children develop, their narrative skills also improve. So narrative develops over time, this development can be explained in terms of increase in content length, amount of information, linguistic and story complexity, and cohesion which ties clauses and other components together (Halliday & Hasan, 1976). So to tell a cohesive narrative, the child must draw upon linguistic, cognitive, and pragmatic skills. They also start sequencing the events correctly with proper character descriptions for establishing a plot. These narratives may be of real facts about personal experiences or created from their imagination. Hedburg and Gammon (1986) described the stages of development as:

Stage 1: Heaps (2 years). In this stage, children start narration by joining unrelated events or ideas with frequent topic switching.

Stage 2: Sequences (2 -3 years). Children narrate events of stories with a capricious connection between the story aspects regarding character, environment, or topic.

Stage 3: Primary narration (3-4 years). Children start to develop a story with a central theme that describes the topic, character, and context with the emergence of cause-effect relation in these stories.

Stage 4: Focused chains (4-5 years). Children develop a story by including elements like character, context, and topic correctly. Children tend to develop a logical sequence for the storyline, but still, the listener's knowledge is needed to interpret the ending. They also start using the conjunction 'and,' 'but,' 'because' at this stage.

Stage 5: True narrative (5-7 years). A real narrative will have the correct story plot, which includes logical sequencing of appropriate events, accurate description of the character, and context. The development of the story will be based on the intention and desire of the character.

Despite linguistic development, there is a development trend seen in the use of paralinguistic features in storytelling. Young children showed more use of paralinguistic gestures than school-aged children though they have a less complicated narrative structure. Thus children may be compensating their less complicated narration with more affective information (Riley,1992). Similarly, there is a developmental trend seen in evaluative content in the story. This evaluation and goal setting in the story will increase with an increase in age.

Cultural differences

Both the content and schema of narratives can change based on cultural variation. It includes the change in organization and the role each character play might vary based on each culture (Heath,1982). It is essential to consider the cultural background because the type and frequency of experience the children face differ from one culture to another. Children from diverse cultural backgrounds may even have limited exposure to narratives, and this can affect the recounting of personnel experience and answering questions from a story context. And also, children who are exposed to less-used narrative forms, i.e., which are not being used in mainstream narration, can get confused or misunderstood with their narrative pattern.

By keeping this as a base, it provides a framework to explore the language development of children (McCabe & Peterson, 1991). There are three reasons to explain the importance of narrative skills. First, narratives are used as a predictor for the development of oral language (Standler & Ward, 2005). Second, there is a direct relationship between narrative skills and children's later literacy development and academic accomplishment. Third, narration requires an active cognitive state because they need oral, logical, and memorial abilities (Stein & Albro, 1997). Narrative development is defined as 'becoming increasingly able and sophisticated in creating and communicating a "good story," a reporting of experience or events' (Bloome et al., 2003).

Thus, storytelling tasks are used for assessment and management of children with language impairments. Narration is an efficient-clinical and research tool. It allows examiners to analyze multiple linguistic features concurrently using a single small sample. By analyzing the content of the story, the language level of children can be

predicted. It forecasts early language impairment and also forthcoming school attainment of children vulnerable to later academic problems.

Among language sample analysis, one of the authentic complement or substitute for norm-referenced testing is narration. Language sample analysis, like narratives, overcomes the weakness of norm-referenced testing. These narrative samples provide comprehensive information about the child "s language in a real-world situation (Costanza & Smith, 2010; Hewitt et al., 2005). Through narration, children can express their language more dynamically and creatively (Fiestas & Pena, 2004). During the narration, children with typical language development use syntactically and semantically sophisticated units along with abstract and imaginative thinking. In doing so, children will add socially apt terminology while maintaining an organization (Justice et al., 2006; Joffe et al., 2008; Schoenbrodt et al., 2003). For proper narration of a story or an event, there is a need for age-appropriate cognitive development. If it is inadequate, it will lead to a challenge in story narration for many children. Narrations are developed at an early age and across different linguistic and cultural boundaries (McCabe & Bliss, 2003; McCabe & Rollins, 1994; McGregor, 2000). The output of the storytelling is checked through story plot description and number of storylines included in narration. It can also assess how a child can give information about introducing the characters, building a proper sequence, and concluding the story (Berman & Slobin 1994; Bocaz, 1986). Thus, story narration can be used as an assessment protocol for children with language impairment.

Need for the study

Narrative language samples may offer a valid complement or even alternative to norm-referenced testing. But there are studies which portray language development by narration task in both western context and Indian context. But the trend of development of lexical and grammatical skill are not parallel in these contexts. So there is a need to display the language development of children on a regional basis. From the literature, it is evident that extrinsic factors like culture, socioeconomic status, parenting style, and type of schooling also affect lexical and grammatical skill development. These things have to be considered during the speech and language assessment protocol. For this, the clinician should be aware of the fact that there can be variability in the development of lexical and grammatical skills in children from different regional and cultural backgrounds. Thus there is a need to explore the language development of children from different geographical contexts.

The developmental effect of lexical and grammatical skills in young children using narrative skills is less explored in the Malayalam language. And narrative skill development using story retelling tasks is also not being used in the Malayalam language. So this study is attempting to unveil the lexical and grammatical skill development in typically developing Malayalam speaking children from the age range of 5 to 7 years.

CHAPTER 2

Review of Literature

As narratives are highly variable, retelling scripted stories control the content of the story, length of the story, and grammatical structure in the story. This scripted narration is done mainly in four ways. They are oral only (here, the child will hear a story without any support of depictions); oral followed by pictures (the child will listen to a story with no representations, but photographs will be introduced for retelling story task); oral along with photos (the child hears the story with picture support, while story retelling also the child is allowed to look at pictures); and, pictures only (in this, the child will be asked to tell a story from images with no oral support). From this story-retelling task, the language output measures like Mean Length of Utterance (MLU), Percentage of Ungrammatical Sentences (%UGS), Total Number of Words(TNW), and Number of Different Words (NDW).

- An ungrammatical sentence is operationally defined as an error of omission, substitution of any morpho-syntactic class
- The %UGS can be derivative of the number of UGS if multiplied divided by the total number of sentences in the sample and then multiplied by a hundred.
- TNW is the sum of words in a sample.
- NDW is the number of novel (non-repeated) words in a sample.
- MLU is a measure of sentence length.

$$\text{MLU (words)} = \frac{\text{Total number of words}}{\text{Total number of utterance}}$$

$$\text{MLU (morphemes)} = \frac{\text{Total number of morphemes}}{\text{Total number of utterance}}$$

TNW will provide a measure of the total productivity of the narrative, and NDW is interpreted as a measure of lexical diversity.

There are mainly two types of analysis used by the experimenters to document the vocabulary, syntax of children while assessing narrative skills. They are micro-structural and macro-structural analysis, respectively (Westby, 2005). Macro-structural analyses are based on the rating given to story narration. It includes the presence or absence of relevant information, characters, etc. The Microstructural analysis provides an in-depth analysis of the narrative sample (Brown, 1973; Miller, 1981). It could, therefore, used to differentiate children with language disorders from those typically developing children (Liles et al., 1995). In micro-structural measures, different linguistic aspects of language are analyzed. In the narrative, sentence length is usually calculated by the MLU. The NDW calculates lexical diversity in a sample. Syntactic complexity is calculated by the number of clauses present per utterance (the Subordination Index, or SI, also known as clausal density). Overall, productivity is measured by TNW. Grammatical error rates are measured by parameters such as the number of omitted bound morphemes or the amount of erroneous or omitted words. Thus the microstructural analysis of narrative language samples is sensitive for identifying and discriminating several types of language disorders like autism spectrum disorder (Manolitsi & Botting, 2011) and specific language impairment (Norbury & Bishop, 2003). Another method for calculating the MLU is Developmental Sentence Scoring (DSS) (Lee, 1974). DSS is a norm-referenced language sample analysis measure for children of age 2; 0 (Years; months) to 6; 11. The DSS

analysis is based on two parameters called completeness and uniqueness of utterances. Completeness means statements should both have a subject and a verb; sentences not having both a subject as well as a verb are removed from the DSS evaluations. Uniqueness means that all utterances have to be distinctive; corresponding identical utterances are removed from the DSS review. These are the standard analysis method.

Harmon and Murata (2018) investigated the MLU, %GCS, NDW, TNW from the narrative sample of monolingual Spanish speaking typically language developing (TLD) children and those with Specific Language Impairment (SLI). They tried to differentiate these two groups based on language productivity. Thus the study aimed to check whether the language productivity of specific language impairment children is significantly affected when compared to typically developing children.

A total of 50 children participated in the study between the age group of 4.0 and 6.11. SLI children who had attended at least two months of language training were recruited in the study. Two groups mentioned in the study was, one with SLI, and the other was TLD. Both groups had 25 participants each. SLI children who had a history of motor delay or language impairment, whose non-verbal intelligence less than 85 in Kaufman Assessment Battery for Children Second Edition (K-ABC2), children who scored less than 78% in Spanish language screening test. TLD children who had a history of motor delay or language impairment, whose nonverbal intelligence less than 85 in K-ABC2, children who scored less than 78% in Spanish language screening test.

The procedure of testing took 45 minutes, and it happened in one or two sessions if the participant seemed to be tiered. To elicit the language sample clinician narrated one of the two Spanish stories used in the study. And later, children are asked to retell the

stories with neutral prompts from the clinician. All the narration samples were audio-recorded and transcribed for further analysis in SALT software.

Results reveal that the effect of the story had no significant impact on the UGS, MLU, and TDW models, while the effect of the story was significant in the TNW. NDW and MLU did not correlate in the SLI group, but there was a significant correlation between NDW and MLU and in TLD children. So the children with SLI are dissimilar from the TLD in their language productivity grammatical measures. And they also use shorter sentences and ungrammatical sentences than their peer group in the story retelling task.

This study concluded that story retelling could be used as a valid tool for measuring language productivity. Thus any decrease in the measures will identify children with specific language impairment from normal. But in this study, they used different narratives for the story retell task, which was an extra variable that affects the narration and also to generalize all these statements broader sample size is required.

Temiz (2018) investigated the narrative skill of bilingual children belongs to the lower socioeconomic status before and after 14 weeks of story retelling training. The study was conducted in the Van district of Turkey, where Turkish was used less, and another Kurdish language was used majorly. The participants in this study were from a primary school that speaks the Kurdish language for day-to-day communication and Turkish language for educational use. They monitored 30 students for this study. The participants were divided into two groups one experimental group and another control group aged from 58 months to 64 months; each group had 15 participants. Both class groups had a curriculum of story narration in the syllabus, but it was not with good

storybooks and materials. So the experimental group was provided with 14 book reading and 14 story retelling activities with new books and materials for five months. In this period, the children were encouraged to read the picture book every day and also to demonstrate the story using the materials provided.

The story retelling abilities of the children were checked twice one before the training period and another after the training period. The stories told by the children were transcribed. They checked story grammar components based on Labov's definitions. Labov defined a clause as an expression with the smallest subject and a verb. This coding includes constraints of the narrative construction include the abstract which means summarizing the whole story in 1 or 2 sentences, orientation (points in the story about people, orientation and time), complicating action (the main point of the story with some events to define the problem), evaluation (the storyteller's point of view of reasoning the problem), resolution (the clarification of the issue in the story), coda (free clause at the end of the sentence to specify narration is over).

The results reveal that from the story grammar evaluation, no child used abstraction and evaluation while narrating. The control group had no significant effect on pretest and post-test scores in story narration. The experimental group showed a substantial improvement in the orientation, complication action, and resolution. There was no significant improvement noted in the coda.

From this study, it was evident that children from lower socioeconomic status in Turkey need extensive training in the second language. And, this can be attained by storytelling training and other activities like book reading. The limitations of the study were that the population they took for the study was too small. The children are not from

the same socioeconomic status, and there are other factors also for language decrement in this population that have been ignored.

Alt et al., 2016 explored the influence of socioeconomic status in the narrative skills of children. In this study, they checked parental education as a catalog of socioeconomic status. They included 398 kindergarten children in one group, and 509-grade two children who speak Spanish and English were included in the study. The mean age of kindergarten children was 5.7 years, and second grade was 7.7 years. The children in that group were again divided into two based on the educational level of the mother. All children were selected with the inclusion criteria of no special education history and normal progress in school. All the data was collected from Spanish-English speaking bilingual children.

The language sampling procedure included the narration of the story using picture books. If the story was in Spanish, the clinician was given instructions also in Spanish. After the storytelling, the clinician made the children retell the story by looking at the picture. Verbal prompts and encouragement were provided for more narration. Later, the language sample was transcribed by proficient speakers of both languages. These were done based on four domains: utterance segmentation, main body words and morphemes, words, morphemes, and mazes, and maze placement. Based on the SALT database, they calculated the MLU; the NDW; (NSS; conjunctions–type (CT); and subordination index (SI).

The results revealed that for English samples in kindergarten children, displayed inferior language skills in children of parents with less education than children of parents with a higher level of education in those five measures. Amongst the grade two students,

only three of five measures were significantly variable. Those are NDW, NSS, CT. MLU was minimally effected as an alteration of socioeconomic status. In the Spanish sample, socioeconomic status had no significant effect on both classes.

Thus, this study concluded that despite saying a negative influence of socioeconomic status on language development. The effect of socioeconomic status was less than the anticipated impact on English and almost absent for Spanish. But in this study, they did not ask any extra information from parents regarding their place, education, and geographical details apart from the questionnaire. Thus, the limitation of their study is the limited inclusion of language in the assessment.

Khan et al., 2016 investigated the age-related development of story structure in young children in narration tasks. The study sought to check the unidimensionality of story structure in theoretical and real situations, to characterize the story structure difficulty in each level and to determine whether children displayed development on each level of story structure. Besides, they have also checked the age-related development of children to form higher-level goal-based targets during narration in each age group. For assessing this, they counted the number of events they explained during each episode of narrative in all age groups.

A total of 386 children between the age of 3 to 6 participated in the study. Children who were proficient in English and had no significant language or developmental delay, as reported by the parents, were included in the study. In this, 57.1% were girls, and the rest were boys. They were drawn from different regional backgrounds and almost the same socioeconomic status. They divided the children into four age groups like 36–47 months, 48–59 months, 60–71 months, and 72–83 months.

The number of children included in each group varied from 60 to 135 in number. The number of children in each group was 87, 135,104,60, respectively.

In order to collect the narrative sample, each child was assessed separately in a quiet room. Each child had to retell a randomly assigned story that was developed for study purpose. The picture book consisted of 16 pages with script length between 364 and 375 words in length. All stories had a similar format with opening, the introduction of characters, the main event of the story with three episodes, and ending with a story resolution. While story retelling, the clinician provided only neutral cues. All the story narration was audio and video recorded for analysis. A total of 60 story structures was assessed, which were then divided into five sets of theoretically similar items: nouns and noun modifiers, verbs and verb modifiers, sentence complexity, storytelling conventions, and story structure. Each story structure was scored as 0-1, 1 as present, and 0 as absent story structure.

Findings of the study showed that while checking the unidimensionality of story structure, out of 21 item story structure, 16 items were loaded into a single dimension using parallel analysis and exploratory factor analysis. In item difficulty analysis, they arranged the result of story structure items difficulty in easy to challenging levels. In this resolution, easy answers and sub-goals (events in episodes) were the difficult ones. The result of age-related progression in the story structure showed that children between the age range of 36- 47 months had more difficulty in sub-goals of the story and least in the overall goal of the story. Children between the age range of 48 to 59 months were able to recognize all story construction constituent that 3-year group. Children in the age range of 73- 83 months presented mastery in identifying and containing nearly all story

constructions. The problematic and easy components remained the same. In the narrative episode- structure development analysis showed a progressive trend of more number of events parallel to age increment.

The drawbacks of this study are there was a ceiling effect observed in 80% of the children in the 6-year age group, i.e., they were able to find all story structures. And item difficulty analysis also revealed that mean story structure ability level was higher than the mean difficulty level.

Kim. (2016) investigated the presentation modality of story narration (relive narrative stimuli versus audio-recorded narrative stimuli) that affect story comprehension and retelling ability. In this study, 193 children in kindergarten, 2nd grade, and 4th grade participated in the study. From kindergarten, 54 children, 74 from 2nd grade, and 65 from 4th grade took part in this study. Children who were less proficient in English, who had a history of any language disorder were excluded from the study. Children from kindergarten, 2nd grade, 4th grade were harmonized based on language comprehension assignment. Later they were arbitrarily assigned to live or audio recorded story samples. Children in the live narration group received the story told by the clinician. The other set of children heard the story sample in an audio-recorded fashion. Children were then asked to repeat the story, and understanding examination questions were also asked. All the narration samples were audio-recorded and transcribed for further analysis.

The results of language analysis showed that as age increases, the number of utterances also increases. Kindergarten and grade 2 children showed significantly better performance in narrative comprehension in live condition than in audio recorded condition. In contrast, there was no significant effect of live condition and audio recorded

condition in grade four children. And in the quantification of oral retell ability, there was no significant effect of the live and audio recorded condition among all classes.

So this study stated that the way of presentation of the story to the children affects story comprehension. To identify the comprehension domain, the authors did not include too young children and older adults. They could have also investigated the effect of presentation modality in the language-impaired population.

Westerveld and Heilmann (2013) investigated macrostructure and microstructure language analysis in English speaking children in Newzland and United States through narration. And also, they manipulated the elicitation condition using picture cards to check the effect of geographic location versus story retelling performance.

The participants from Newzland encompassed 66 school-aged children from 6.0 to 7.11 years. All those children were drawn from primary school with mid-socioeconomic status. The inclusion criteria included children with no history of hearing impairment, neurological problems, and children who attended speech therapy. Besides, to confirm the language development, they administered the Picture Vocabulary Test -3rd Edition to check the receptive vocabulary. Narrative samples of US children were collected from the SALT database of the same age range and obtained with the same story retelling method.

Three undergraduate students conducted the story retelling task in the Newzland population. The task was done individually in a quiet room. The clinician narrated the story using scriptless picture book based. Then the children were allowed to retell the story in two conditions such as with picture book and other without picture book. All the

data of US children were collected under one condition, i.e., with a picture book. And they compared the effect of geographic location on narrative components and to the two conditions of story retelling. All the language samples were analyzed using SALT software conventions. In the microstructural analysis, the semantics and syntax of the narration were analyzed. In the macrostructural analysis, the global structure was analyzed.

The result of the study revealed that children scored significantly better on the narrative scoring scheme (NSS) in picture support condition than without picture support condition. And also, children narrated significantly longer stories, with more NDW and fewer mazes (All reformulations, reappearances, and disfluencies) in picture support condition. But there was no significant effect observed on the MLU in both conditions. On comparison of the effect of geographic condition on narration. US children scored an increased number of maze words and number of words per minute (WPM), while other measures were not significantly different. In the macro structural level analysis, there was no significant difference in the NSS score observed.

This study portrayed that the language output from the story retelling task doesn't vary with geographical areas. This comment was based on the microstructural analysis of the language sample like TNW, utterance length, etc. but the limitation of the study was this result cannot be extrapolated to other geographical areas of the continent or world. This was because of the lack of generalization in this study. And also, different types of narration, like personnel narration or expository skills, cannot be generalized from this result.

Prasad and Prema (2013) they attempted to create an oral language corpus of children between the age of six to eight years, and they also tried to see the usage of case markers in their spoken language. 240 children between the age of six to eight years were included in the study. They took 30 girls and boys in each group for the study purpose. All the children were drawn from Kannada medium school by administering WHO ten Question disability screening checklist, and by considering teachers report about the children. They were divided into four groups based on age (6-6.5, 6.6-7.00, 7.1-75, and 7.6-8.00). For eliciting oral language, they used three tasks. 1) story retelling, 2) description of personnel events, 3) description of Computerized linguistic protocol for screening (CliPS). All the data were audio-recorded and analyzed using SALT software.

Results revealed that the lexical category used by elder children is in the order of PNG Markers being the most then Adjectives, followed by Native words, Verbs, Nouns, Negatives, Comparatives, Preposition, and standard words as the least. The trend of usage of PNG Markers across the age range was reported as inclined, with boys having more usage in each group. This article states that case markers also play an important role in portraying the language development stage.

Heilman et al., 2010 they tried to describe the NSS and also to analyze it linguistically, the second goal was to find the relation between vocabulary, grammar, and story organization skills. They recruited 129 school going children between the age of five to seven years for study purposes. All typically developing children were selected for the study based on inclusion and exclusion criteria. All participants were asked to retell the story using a non-script picture book. Those data were digitally recorded, transcribed, and analyzed using SALT software.

The results revealed that by checking the hierarchical regression equation, the vital variable in forecasting the narration organization skill was vocabulary as measured by NSS. The grammatical skill of children also well correlated with NSS scores, but it was not a predicting measurement for assessing macrostructural ability.

The limitation of the study was there were chances in regression analysis being affected by sampling context in result calculation. This was due to high internal validity in language sampling in a single language.

From the story retelling task, the language productivity measures like the mean length of utterance, Percentage of Ungrammatical Sentences (% UGS), Total Number of Words (TNW), and Number of Different Words (NDW) can be measured. The developmental effect of lexical and grammatical skills in young children using narrative skills is less explored in regional wise.

CHAPTER 3

Method

The present study involves the quantification of grammatical and lexical development in typically developing boys and girls in the Malayalam Language.

Aim of the study

The proposed aim of this study is to precisely quantify the story retelling ability of typically developing Malayalam speaking children in primary school. Thus, this measure of language productivity, derived from story retells avail a reliable tool to profile the development of lexical and grammatical skills of typical language development (TLD) children.

Objectives of the study

i. To profile the lexical and grammatical skills of typical language developing (TLD) children.
ii. To profile the trend of development of mean length of utterance (MLU), number of utterances, total number of words, number of different words in the story retelling task.
iii. To profile the lexical and grammatical developmental changes in girls and boys.

Hypothesis

The study included the following three alternate hypothesis

H_01 There is no difference in the snapshot of the overall cross-sectional profile of lexical and grammatical skills in language development for typically developing children.

H_02 There is no difference in the development profile of MLU, number of utterances, the total number of words, number of different words in the story retelling tasks in typically developing children.

H_03 There is no difference in the development of MLU, number of utterances, the total number of words, number of different words in the story retelling tasks between boys and girls in typically developing children.

Research design

A one-shot single group cross-sectional survey design was used among typically developing children in this study. The targeted variables for the study were grammatical and lexical development in typically developing children. Its measures are MLU, GCS, GICS, TNICS, TNU, TNW, and NDW.

Participants

A total of 40 Malayalam speaking children between the age of 5-7 years. These children were divided into four groups group1 children with 5-6 years boys and group 2; children with 5-6 year girls, group 3; children with 6-7 year boys; and group 4; children with 6-7 year girls. Each group included 10 participants. All the participants in this study were drawn from two government lower primary Malayalam medium in Kerala. Primary school is operationally defined as educational institutions catering for pupils between the ages of about five and eight, i.e., between grades one to four, respectively. All the

children were from almost similar socioeconomic status and the same cultural background. The sample of children was drawn from the classroom-based on the teacher's opinion about the child's academic, social, emotional status as average performance. All the children were taken from the same regional background and matching socioeconomic status. It was ensured through interview of parents that none of them had a history of hearing loss, sensorimotor or neurological problems, psychological disorders, or health problems.

1) Children with TLD (n=20) of 60-71 month
2) Children with TLD (n=20) of 72-83month

The participants were selected based on the following inclusion and exclusionary criteria.

Inclusion criteria

1) Child should have normal speech, language, communication, and cognition.
2) Child should have a normal history of motor as well as speech milestones which were ensured with parental interview.
3) Child with no history of motor, hearing, emotional, or neurological problems.
4) Medium of schooling should be Malayalam.
5) The mother tongue of the children has to be Malayalam.
6) Participants should have a similar regional and socioeconomic background.
7) Children should have an average scholastic performance in school, which will be ensured by the opinion of the class teacher.

Exclusion criteria

1) Children suspected or reported to have any issues related to their language development as reported by teachers or parents.
2) Children with a history of motor, hearing, emotional, or neurological problems.
3) Children who attended speech-language therapy for any reason.
4) Children who are bilingual or whose mother tongue is not Malayalam.

Procedure

All the procedures performed in the study were in accordance with the ethical standard of the institution.

The primary objectives were explained to parents, and written consent was obtained.

1) Stimulus generation

The scripted story, along with pictures, was used for the story retelling task. Malayalam Panchatantra stories, which were unfamiliar to the child, was used. Children who are familiar with the story were excluded from the study. The selected stories had a beginning, end, and moral.

2) *Task administration*

Examiner assessed the language performance of the child using informal language assessment. The informal evaluation was done by a preliminary picture description task using a storybook and through general conversation. Each child was assessed individually in a quiet classroom. The task was administered during the morning session, i.e., from 10 am to 12: 30 pm because children were tired in the afternoon.

Examiner built a rapport with each child by asking a few general questions as well as familiarizing the recording procedure to the child. Later each child was instructed to describe the picture cards that were shown. The testing time for each child was approximately 20-130 minutes.

Tasks were administered in the following order:

1. In this task, the examiner narrated a story by showing a series of picture cards for 5- 10 minutes.
2. Later the picture cards were shown sequentially to the child and asked to describe the picture by making a story for 10 minutes.

Only neutral cues were provided during the story retelling task. The story retelling task was audio-recorded and later recorded samples were transcribed for further analysis.

3) Analysis of language transcripts

Data derived from the samples were transcribed. All the unrelated utterances were excluded. Later, all the utterances were analyzed manually, and the outcome parameters like GCS, GICS, % GCS, % GICS, TNICS, MLU, TNW, NDW were measured.

In this study the outcome parameters are operationally defined as;

GCS. A grammatically correct sentence is operationally defined as a sentence that has a correct subject-verb agreement with another in their tense.

GICS. An ungrammatical sentence or grammatically incorrect sentence is operationally defined as an error of omission, substitution, or commission of any morpho-syntactic category.

Percentage of GCS. For obtaining the %GCS, the number of GCS is multiplied by one hundred and divided by the total number of sentences in the sample.

Percentage of GICS. For obtaining the %GICS, the number of GICS is multiplied by one hundred and divided by the total number of sentences in the sample.

Total number of incomplete sentence (TNICS). An incomplete sentence is operationally defined as a sentence that is broken or with no completion.

MLU. MLU is a measure to find the syntactic complexity of the child's language. Brown (1973) defined MLU as:

$$\text{MLU (words)} = \frac{\text{Total number of words}}{\text{Total number of utterance}}$$

$$\text{MLU (morphemes)} = \frac{\text{Total number of morphemes}}{\text{Total number of utterance}}$$

In this study, MLU (morphemes) was calculated. It is traditionally calculated by collecting 100 utterances spoken by a child and dividing the number of morphemes by the number of utterances. But in this study, the number of utterances produced by the children were around 30 to 60. Thus this reduction in the number of utterances has affected the MLU calculation.

The calculation of MLU was based on the following considerations:

The following linguistic units were one morpheme

1. Uninflected lexical morphemes (e.g., run, fall)
2. Contractions (e.g., let’s, don’t, won’t)
3. Catenatives (e.g., wanna, gonna)

4. Phrases (oh boy, all right, once upon a time, a lot of), compound words (football, toothbrush, together), diminutives (doggie, horsie, duckling), reduplicated words (bye-bye, see-saw, hip-hop)
5. Irregular past tense (e.g., did, was)
6. Plural pronouns (e.g., us, them)

The following linguistic units were counted as more than one morpheme:

1. Inflected forms: regular and irregular plural nouns (men, women), possessive nouns (Rohan's laptop), third-person singular verb (she write+s), present participle (I am walking), past participle (I have walked), regular past tense verb (I walked), reflexive pronoun (myself, itself, herself), comparative and superlative adverbs, and adjectives.

2. Contractions: (e.g., it's, she's, he'll, they're, what's, she'd, we've, can't, aren't).

Similarly, the Malayalam language was analyzed, and MLU was calculated.

TNW. The total number of words in the sample will provide a measure of the overall productivity of the narrative. And it is operationally defined as the total number of non-repeated words in the narration sample.

NDW. The number of different words is interpreted as a measure of lexical diversity. It is operationally defined as the number of new words used by the child in the narration sample.

For qualitative analysis, a scoring was given for each parameter in the story. The parameters of the story considered were the introduction, sequence, and end.

Introduction. If the child was able to introduce characters, place, and scenario properly, then two points were provided for that. If an introduction was present partially, then one point was given. If there was no introduction of characters, zero was the score.

Sequence. It is defined as the sequencing of events in the story. For score two, the child has to tell all events correctly and in the correct order. A story with missing events and altered sequences were provided with score 1. The complete irregular story or story with very less event description was scored as 0.

End. It is defined as a story with a conclusion or moral. The stories with proper conclusion were scored as 2, with partial conclusion was scored as 1, and no conclusion as 0.

Reliability

To check the correlation of the results, the results were interpreted by two independent blind ratters. Thus in this way, inter-rater reliability was checked, and the mean of the results was considered as the final values. Test-retest reliability was rated for at least 10 % of the samples.

The appropriate method of statistical analysis was used using SPSS software.

CHAPTER 4

Results

The present study aims to precisely quantify the ability of story-retelling in typically developing Malayalam speaking children in primary school. A total of 40 children, both boys, and girls in the age range of 5 to 6 and 6 to 7 years, participated in the study. They were divided into two groups, and each group consisted of 20 children (10 boys and 10 girls). The task carried out using a Malayalam Panchatantra story.

The result of the present study are discussed with respect to quantification of the language outcome parameters like Grammatically correct sentences, Grammatically incorrect sentences, Total number of sentences, Total number of words, Number of different words, Mean length of utterance across age group and the age range. Statistical analysis was done for the parameters mentioned above manually and using SPSS software.

To verify the hypothesis, the mean, median, and standard deviation of the variables, as mentioned above, were compiled.

Table 4.1

Mean, Median, Standard Deviation across Age Group

Parameter		Age			
		Group 1 (5-6)B	**Group 2** (5-6)G	**Group 3** (6-7)B	**Group 4** (6-7)G
GCS	Mean	5.1	4.5	6.6	8.2
	Median	6	4	7	7.5
	SD	1.44	1.71	2.63	2.9
GICS	Mean	5.1	5.9	3.4	2.9
	Median	5	5	3	3
	SD	1.1	1.52	1.26	0.73
TNICS	Mean	1.9	1.9	0.9	0.9
	Median	2	1.5	1	1
	SD	0.73	1.1	0.87	0.73
TNW	Mean	30.6	34.7	35.2	35
	Median	31	34.5	34	33
	SD	7.35	5.57	6.05	6.49
NDW	Mean	2.1	2.3	4	4
	Median	1.5	2.5	4	4
	SD	1.4	1	1.56	0.94
MORPHEMES	Mean	60.4	78.8	81	76.8
	Median	54	82.5	80	73.5
	SD	18.72	17.73	15.82	21.7
TNU	Mean	44.5	57.3	62.3	57.9
	Median	38.5	61.5	59.5	56
	SD	14.57	12.9	13.62	16.09
MLU	Mean	1.36	1.39	1.3	1.32
	Median	1.36	1.37	1.31	1.3
	SD	0.05	0.04	0.05	0.6

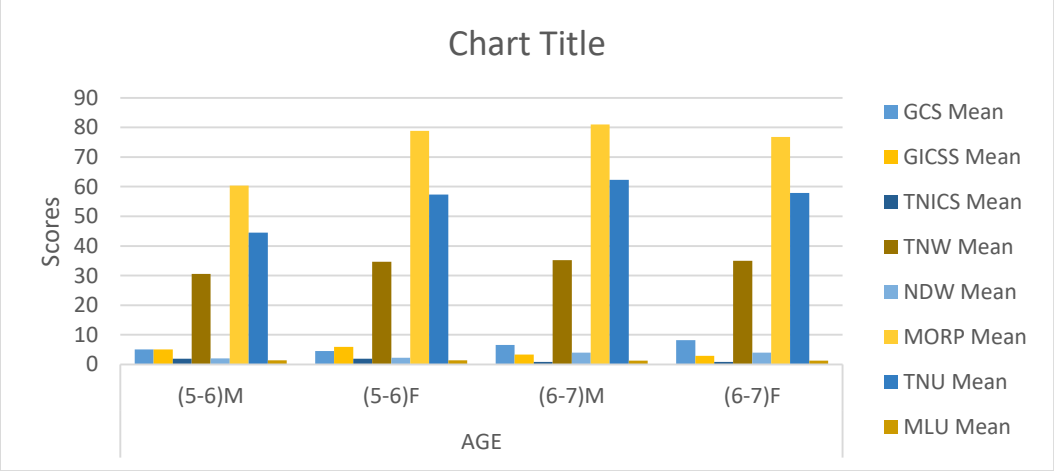
Table 4.1 describes the mean, median, and standard deviation of the language output parameters among the four groups. As shown in the table, better language scores were for group 3 and group 4 (elder group) than group 1 and group 2 (younger group). This trend was observed in all parameters except one (group 2 has more total number of

morphemes than group 4). Hence the overall better performance was exhibited by group 3 and group 4.

Similarly, figure 4.1 shows the depiction of mean, median, SD of language output scores for four groups.

Figure 1.1

Mean scores of Language Parameters across Age Group



Note: GCS= grammatically correct sentence, GCIS= grammatically incorrect sentence, TNICS= total number of an incomplete sentence, TNW= total number of words, NDW= number of different words, TNU= total number of utterances, MLU= mean length of utterance.

Age-wise comparison

Group 1 included boys age 5-6 years, and group 2 included girls age 5-6 years. Similarly, groups 3 and 4 included boys and girls of 6-7 years, respectively. When comparing the development of language by story retelling across these two age groups, groups 1 and 2 compared with group 3 and 4.

Table 2 depicts the cross-tabulation of language parameters for both age groups. A chi-square test of independence showed that there was a significant association between two age groups in the development of language parameters between 5-6year group and 6-7 year group [$\chi 2$: 53.093; df: 18; p:.0002]. Thus this result implies that groups 3 and 4 performed better than groups 1 and 2 in the story retelling tasks

Table 4.2

Cross-Tabulation table of Language Parameters across age group

Group	N	GCS	GICS	TNICS	TNW	NDW	MORPHEME	TNU	MLU
Group 1 (5-6)B	10	51	51	19	306	21	604	445	13.65
Group 2 (5-6)G	10	45	59	19	347	23	798	573	13.95
Group 3 (6-7)B	10	66	34	9	352	40	810	623	13.07
Group 4 (6-7)G	10	82	29	9	350	40	768	579	13.20
Total	40	244	173	56	1355	124	2980	2220	53.87

Note: GCS= grammatically correct sentence, GCIS= grammatically incorrect sentence, TNICS= total number of an incomplete sentence, TNW= total number of words, NDW= number of different words, TNU= total number of utterances, MLU= mean length of utterance.

Similarly, the development of story narration across these age groups analyzed using the chi-square test. Table 3 depicts the cross-tabulation of story parameters like the introduction, sequence, and end of the story. A chi-square test of independence showed that there was no significant association between two age groups in the development of

story narration parameters [$\chi 2$: 0.628; df: 6; p:.995]. Thus there is no significant difference in story narration parameters between two age groups.

Table 4.3

Cross-Tabulation for Story Narration Parameters across age group

Group	Introduction	Sequence	End
Group 1 (5-6)B	11	12	14
Group 2 (5-6)G	13	14	13
Group 3 (6-7)B	14	15	15
Group 4 (6-7)G	14	19	16
Total	52	60	58

Age-wise comparison of language parameters in story retelling

To see the effect of age in the development of language in males, group 1 of 5-6 year boys was compared with group 3 of 6-7 year boys. Similarly, group 2 of 5-6 year girls were compared to group 4 of 6-7-year-old girls. A chi-square test was done to analyze the effect of age in language development. Table 4 and 5 depicts the cross-tabulation of boys and girls in each age group. When comparing the gender-wise development of language through story narration, there is a significant difference between the two variables. Boys in the 6-7 year age group show better language development than boys in the 5-6 year group, [$\chi 2$:22.41; df: 6; p: .001]. Similarly, there is a significant difference between the two variables in the 6-7 year group also, i.e., girls in the 6-7 year age group are better in their language development than 5-6 year group.

Table 4.4

Age-wise Cross-Tabulation of Language Parameters for Boys Group

Group	N	GCS	GICS	TNICS	TNW	NDW	MORPHEME	TNU	MLU
Group 1 (5-6)B	10	51	51	19	306	21	604	445	13.65
Group 2 (6-7)B	10	66	34	9	352	40	810	623	13.07
Total	20	117	85	28	658	61	1414	1068	26.72

Table 4.5

Age-wise Cross-Tabulation of Language Parameters for Girls Group

Group	N	GCS	GICS	TNICS	TNW	NDW	MORPHEME	TNU	MLU
Group 3 (5-6)G	10	45	59	19	347	23	798	573	13.95
Group 4 (6-7)G	10	82	29	9	350	40	768	579	13.20
Total	20	125	88	28	697	63	1566	1152	27.15

Age-wise comparison of the development of story narration by story retelling task

The effect of age in the progression of story narration was checked. This analysis was done by comparing parameters of story narration in 5-6 year group boys to 6-7 year group boys and similarly, the 5-6 year group girls to 6-7 year girls group. Tables 6 and 7 depict the age-wise language development in cross-tabulation. A chi-square test of independence was performed to examine the relationship between language development and gender. The relation between these variables was not significant in both age groups.

For age group 5-6 years, [$\chi 2$:.123; df: 2; p: .939] and 6-7 year group, [$\chi 2$:0.198; df: 2; p: .906]. Thus result suggests that there is no significant improvement in story retelling parameters in both genders when compared to age-development.

Table 4.6

Age-wise Cross-Tabulation of Story Narration Parameters for Boys Group

Group	N	Introduction	Sequence	End
Group 1 (5-6)B	10	11	12	14
Group 2 (6-7)B	10	14	15	15
Total	20	25	27	29

Table 4.7

Age-wise Cross-Tabulation of Story Narration Parameters for Girls Group

Group	N	Introduction	Sequence	End
Group 3 (5-6)G	10	13	14	13
Group 4 (6-7)G	10	14	19	16
Total	20	27	33	29

Gender wise comparison

Gender wise comparison of language parameters in story retelling

Gender effect in language development can be investigated by comparing boys and girls in the same age group. I.e., by comparing boys to girls in 5-6 year group and boys to girls group in 6-7 year group. Table 8 depicts the cross-tabulation of language parameters for girls and boys in the age group of 5-6 years. A chi-square test of

independence was performed to examine the relationship between girls and boys in a 5-6-year age group. The relation between these variables was not significant, [$\chi 2$:6.561; df: 6; p: .362]. Hence there is no difference in language development between boys and girls in the 5-6 year age group. Similarly, Table 9 depicts the cross-tabulation of language parameters for girls and boys in the age group of 6-7 years. There is no significant relationship between language development and gender in the age range of 6-7 years also, [$\chi 2$:3.298; df: 6; p: .771] on chi-square test of independence

Table 4.8

Gender-wise Cross-Tabulation of Language Parameters for 5-6 Year Group

Group	N	GCS	GCIS	TNICS	TNW	NDW	MORPHEME	TNU	MLU
Group 1 (5-6)B	10	51	51	19	306	21	604	445	13.65
Group 2 (5-6)G	10	45	59	19	347	23	798	573	13.95
Total	20	96	110	38	653	44	1402	1018	27.6

Table 4.9

Gender-wise Cross-Tabulation of Language Parameters for 6-7 Year Group

Group	N	GCS	GCIS	TNICS	TNW	NDW	MORPHEME	TNU	MLU
Group 3 (6-7)B	10	66	34	9	352	40	810	623	13.07
Group 4 (6-7)G	10	82	29	9	350	40	768	579	13.20
Total	20	148	63	18	702	80	1578	1202	26.27

Gender wise comparison of the development of story narration by story retelling task

To find whether there a presence of superiority of one gender in story narration, the story narration parameters of both girls and boys were compared. Table 10 and 11 depicts the cross-tabulation of gender-wise development in story narration. Here the group 1 males were compared to group 2 and group 3 to group 4. A chi-square analysis was done to check the effect of gender in each group. In group 5-6 years, there is no significant difference between language development and gender, [$\chi 2$:0.241; df: 2; p: .865]. Similarly, in the age group 6-7 years also, there is no significant difference between language development and gender, [$\chi 2$:0.234; df: 2; p: .889]. Thus results show that both males and females in the same age group show no difference in language development by story retelling task.

Table 4.10

Gender-wise Cross-Tabulation of Story Narration Parameters for 5-6 Year Group

Group	N	Introduction	Sequence	End
Group 1 (5-6)B	10	11	12	14
Group 2 (5-6)G	10	13	14	13
Total	20	24	26	27

Table 4.11

Gender-wise Cross-Tabulation of Story Narration Parameters for 6-7 Year Group

Group	N	Introduction	Sequence	End
Group 3 (6-7)B	10	14	15	15
Group 4 (6-7)G	10	14	19	16
Total	20	28	34	31

Reliability results

Interjudge reliability and Test-retest reliability for 10% of the recorded sample indicated that intrajudge and interjudge disagreement was less than 1%.

CHAPTER 5

Discussion

The objectives of the present study were to profile the lexical and grammatical skills of typical language developing children, to profile the trend of development of MLU, TNU, TNW, NDW in the story retelling task and also to profile the lexical and grammatical developmental changes in girls and boys. For checking these objectives, audio recorded story retelling samples from children were transcribed and analyzed.

The profiling of lexical and grammatical skills in young, typically developing children, is described in terms of several language parameters. Grammatical development is assessed by calculating TNU, TNGCS, TNGICS, TNICS, and MLU. To profile lexical skills in typically developing children, the language output parameters like the TNW, NDW words were calculated.

Hypothesis 2:

The hypothesis of the second objective was there is no difference in the development profile of MLU, number of utterances, the total number of words, number of different words in the story retelling tasks in typically developing children. The result of the present study states that there is a significant improvement noted in the development of language parameters from the first age group (5-6 years) to the second age group (6-7 years). This marked improvement was consistent in both grammatical and lexical outcome parameters. As children get older, language development occurs, and this development can be observed in story narration too.

Each parameter in the Grammatical and lexical domain showed a development. They are TNU, MLU, TNGCS, TNGICS, and TNICS, lexical parameters like the TNW and, NDW.

One of the parameters considered in the measurement of the language parameter was TNU. From the result, it is evident that as age increases, there is an increment in the total number of utterances. This development directly implies the development of language in children. As age increases, children try to give more information about the event in many ways. And also, they will try to organize the narration with more information and description. In the present study, the TNU ranged about 25 to 45 in the 5-6 year group and 40- 80 in the 6-7 year group. Berman's (1988) study on preschoolers, schoolchildren, and young adults suggested that as age increases, the length of the story, i.e., the mean number of components mentioned in the story, also increases from 3-11 years. They reported that in young children, the number of clauses averages around 41 to 48 phrases, and in school-aged children, the number of phrases was about 60 to 70 clauses. The study shows a gradual increment in the number of observed clauses in the narration which support the current research.

MLU results show an increase in sentence length with age. This is because the sentence spoken by the children are modified in many ways. As they grow older, the information which they express is complete and will be in a different way with rearranging and rephrasing sentences. Once children's sentence length crosses two years of age, then they begin to expand sentence elements using recombination and expansion (Brown, 1983). In recombination, preschoolers begin to make long sentences by connecting previously occurred components without repetition.

Expansion is by adding more information into the sentence and thereby increasing the sentence length. Thus, the length of utterance is a good indicator of grammatical development, and this is calculated in MLU. Heilmann et al., 2010 reported the growth of language in young children in terms of the Narrative Scoring Scheme (NSS). They have done a microstructural analysis of language and found there is syntactic development with age.

But there is a limitation in the MLU calculation in the current analysis, i.e., to calculate MLU, a minimum of 100 utterances as per the equation is needed. In the present study, the utterance length by the children was ranging from 40-70. In this study, the total number of utterances considered was less. This utterance length was consistent in all children's narration. Thus all children showed a similar kind of utterance length; they were included for further analysis. This may be because of differences in the linguistic development of Indian children from children in western areas. Anaswara et al., 2017 reported a similar result in Kannada speaking normal children with story retelling tasks, which was calculated in terms of T units. T units are used to measure the syntactic complexity in both writing and speaking sample.

MLU calculation was done by dividing the total number of morphemes to the total number of utterance uttered by each child. Brown (1973) and Miller (1981) gave the normative development of MLU level at which grammatical morpheme typically acquired in English speaking children. This normative data shows by 4.5 years; almost all grammatical morphemes will be acquired in typically developing children. But in the language analysis of the current study, more than 50% of the children in the 5-6 year group have some errors in morpheme selection while

speaking, and around 20% of the children in the 6-7 year group also showed few morphemic mistakes while speaking. This minor reason also led to errors in reducing MLU in both groups. Mahalakshmi and Prema (2013) have reported the usage of grammatical morphemes in spoken language. Their study also reported that children in the age group of 6-8 years showed errors in grammatical morpheme during the narration task. And also, a slopping trend was observed in the usage of PNG markers from ages 6 to 8.

TNGCS and TNGICS also showed an age-related increment and decrement, respectively. TNGICS gave an impression of the grammatical development of children. As expected elder group showed reduced grammatical errors. Most of the error was tense errors and following marker errors. These are some of the developmental errors in normal children (Auza, 2009). And this measure is one of the critical parameters to differentiate normal children from children with language impairment. Those children will have less complicated sentences with unexpected errors in sentences (Auza et al., 2017). Similarly, the result of the TNICS sentence also shows an age-related decrease. But the number of incomplete sentences was very few.

As expected in the hypothesis, there is an age-related to lexical development. This development was calculated with parameters like TNW and NDW. There is a significant improvement in both number of words uttered and the different words spoken by the child with an increase in age. These two are reliable indicators of lexical knowledge. Poela and Mariela (2007) reported a significant gain in vocabulary from kindergarten to 1st standard English speaking children through

narration task. And they also concluded when comparing to the Total number of words; Total different words served a sensitive measure for development. Elizabeth et al. (2018) also reported a strong correlation of NDW to age on validation of a vocabulary test in Malai language.

Hypothesis 3:

The hypothesis of the third objective was there is no difference in the development of MLU, number of utterances, the total number of words, number of different words in the story retelling tasks between boys and girls in typically developing children. But on analysis, it is clear that the assumption was not correct, and there is no significant gender wise difference observed in this study. Several studies focus on the language development of boys and girls in preschool. It appears amongst preschool children that girls are more likely to achieve coherence in their stories as their storylines are far freer to emphasize on the links among characters incongruous social relations; but at the other hand, boys tend to have more challenge in creating coherence in their narratives as their tales seem to reflect independent roles engaged in confrontation or aggression (Nicolopoulou, 2008). Girls are also more likely to have stronger memory recall and give better information about past events in interactions than those with boys (Reese & Fivush, 1993).

While many of these studies of storytelling and memory analysis, which investigated children in early school years indicated that gender differences in storytelling skills increase in middle childhood and adolescence (Pasupathi & Wainryb, 2010), their differences in oral memory recall are relatively stable over time (Herlitz & Rehnman, 2008). Eriksson et al. (2012) indicated that girls learn the

language faster, talk sooner, learn language syntax quicker, adopt lengthy sentences and display a broader vocabulary during adolescence, childhood, and early life.

Napoleon (2001) stated that gender discrepancies in vocabulary growth were not consistent throughout various ages. In his research, girls between 4-12 appeared to display a more excellent vocabulary than boys, but only at specific periods (i.e., they did not find any gender difference in vocabulary size between the ages of 4 and 5, or between 11 and 12 years).

Additional observations

Younger children below age 6 showed a general trend of jumping from one event to the other without giving information about the story as a whole (Peterson & Mccabe, 1983). Very similar observations are present in the current study in the 5-6-year-old children group. Most of the children explained each picture card as a single event, and while narration, there was no integration of events seen. i.e., the younger group lacked the threading of stories with emotions, reasoning, situational explanations, character introduction, etc. Burner (1988) reported that the older group had more sequential chaining in story narration than the young group with more reliance on expressions such as "then, after that," etc. Similar observation is noted in the present study also. Children in the age group of 6-7 years showed more language elements in Malayalam like: /pinne/- *next*, /appo/- *then*, /athkazinj/- *after that*, /ennit/- *then.*

Burner (1988) very well explained the development of the storytelling in children using three parameters called initialization, sustaining, and encapsulation. He found that the elder group has an overall mature narrative with a better organization. The elder group had more plot lines, plot line elements, and plot advancement elements. Another observation was the elder group had more sub episodes in narration with an explanation of motive for the action. Very similar results are present in the current study. In the current study, the story used was "The clever rabbit and lion." The development of story narration in children is analyzed by three parameters like introduction, sequence, and end of the story. Children in the age group of 5-6 years explained each picture cards as individual events, i.e., by not telling the cause of the event and motive of the rabbit to do the action. The younger group didn't explain the sub episodes of events like the thought of rabbit about the angry lion and thinking about ideas etc. But the elder group had better encapsulation of sub-events during narration. Their story narration had better reasoning for the events and actions of the story. The results of Rumelhart (1977) support this increment in the story plot from preschool to early primary school.

CHAPTER 6

Summary and Conclusion

In conclusion, the study aimed to precisely quantify the story retelling ability of typically developing Malayalam speaking children in primary school. For this, a total of 40 children were included in the study. These children were divided into four groups group1 children with 5-6 years boys and group 2; children with 5-6 year girls, group 3; children with 6-7 year boys; and group 4; children with 6-7 year girls. Each group included 10 participants. A story retelling task was conducted individually for each child. In this task, the clinician will say a story using picture cards, and the child has to repeat the story by seeing the picture cards. The story sample was audio-recorded, transcribed, and manually analyzed later. For language analysis, the output parameters like Grammatically correct sentences (GCS), Grammatically incorrect sentences (GICS), Total number of words (TNW), Number of different words (NDW), and Mean number of utterances (MLU) were calculated.

Results from the present study indicated that there is a statistically significant difference in language development from the younger group to the elder group. And it was also observed that there is no statistically significant difference present in the language development of girls and boys.

Utility of the study

Story retelling task is generally used as an informal language assessment tool to assess language development in children. As there are no standardized results for narrative tasks, the comparison of language-impaired children with typically developing children is difficult. This similar type of study design can be used to assess the language abilities of children in the following ways.

1) The result of the present study will augment the knowledge of the clinician about the grammatical and lexical development of Malayalam speaking primary school children in the age range of 5-7 years.
2) These eight parameters assessed in the study can be used to quantify the narrative abilities and to predict the developmental track of young children.
3) The narrative ability of young children can be used as a screening criterion to compare typical developing children with the clinical group.
4) The developmental trend can be anticipated and can use in language intervention for children with language delay.

Limitation and future directions of the study

In this study, only a small sample size was considered, and they all from the same district of Kerala, that might affect generalization of the results to entire Malayalam speaking children. For better generalization, the study has to be conducted in a large population with children from different places of Kerala. Another important thing that didn't consider in this study is the socioeconomic status and maternal education. These two influence the language development of a child at a younger age. So in future studies, the children have to divide on this basis also for better results. Another

limitation of the present study is availability of the number of utterances for calculation of MLU. As per the literature, it is up to 100 utterances are required. But, the present study calculated it relatively with available utterances and future studies need in this direction.

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Appendix

The story which will be used for story narration task is “The Clever Rabbit and The Pride Lion”

ബുദ്ധിമാനായ മുയലും അഹങ്കാരിയായ സിംഹവും

(The Clever Rabbit and The Pride Lion)

പണ്ട് ഒരു കാട്ടിൽ ഒരു സിംഹരാജാവുണ്ടായിരുന്നു. അവൻ വലിയ അഹങ്കാരിയായിരുന്നു . കാട്ടിലെ മൃഗങ്ങൾക്കെല്ലാം അവനെ വലിയ പേടിയായിരുന്നു. അങ്ങനെയിരിക്കെ അവൻ കാട്ടിലെ മൃഗങ്ങളെയെല്ലാം കൊന്നു തിന്നുവാൻ തുടങ്ങി. പിന്നെ മൃഗങ്ങളുടെ കഷ്ടകാല0 തുടങ്ങി.

ഒരിക്കൽ അവർ ഒന്നിച്ചുചേർന്നു ഒരു ദിവസം സിംഹത്തിന്റെ മുന്നിലെത്തി വിനയത്തോടെ പറഞ്ഞു. ഞങ്ങളെല്ലാവരും ചേർന്ന് ഓരോ ദിവസവും ഓരോ മൃഗത്തെ അങ്ങേയ്ക്ക് ഭക്ഷണമായി തന്നു കൊള്ളാം . അതു സ്വീകരിച്ചു അങ്ങ് തൃപ്തനായി കഴിയണം. സിംഹത്തിനു മൃഗങ്ങളുടെ അഭിപ്രായം ഇഷ്ടപ്പെട്ടു.അന്നുമുതൽ ഓരോ ബലിമൃഗം സിംഹത്തിനു ദിവസവും ഇരയായിക്കൊണ്ടിരുന്നു.

മാസം ഒന്ന് കഴിഞ്ഞു. വൃദ്ധനായ ഒരു മുയലാണ് സിംഹത്തിന്റെ അന്നത്ത ഇര.എങ്ങനെ ഞാനിതിൽ നിന്ന് രക്ഷപെടും എന്നായി അതിന്റെ ചിന്ത.ഇങ്ങനെ ഓരോന്നു ചിന്തിച്ചു മുയൽ പതുക്കെ നടന്നു.സിംഹത്തിന്റെ മുൻപിൽ വളരെ വൈകിയാണ് അവൻ എത്തിയത്.സിംഹമാണെങ്കിൽ വിശന്നു വലഞ്ഞിരിക്കുകയാണ്. കൃത്യസമയത്തു ഭക്ഷണമായി മൃഗം വന്നു കാണായ്കയാൽ സിംഹം കോപം കൊണ്ടു വിറച്ചു.മുയൽ വളരെ പേടിച്ചുകൊണ്ടാണ് അടുത്തുചെന്നത്. "ഇത്രയും വൈകിയതെന്ത് ? എത്ര നേരമായി ഞാൻ വിശന്നിരിക്കുന്നു ." സിംഹം മുയലിനെ ശകാരിച്ചു. മുയൽ വിനയപൂർവം തൊഴുതുകൊണ്ട് സിംഹത്തോട് പറഞ്ഞ്. " ഞാൻ അങ്ങയുടെ മുന്നിലേക്ക് ധൃതിയിൽ വരികയായിരുന്നു. വഴിയിൽ മറ്റൊരു സിംഹം വന്നു എന്നെ പിടിച്ചുതിന്നുവാൻ ഒരുങ്ങി. അതാണ് ഇത്രയും താമസിച്ചത്. വൈകിയത് അടിയന്റെ കുറ്റമല്ല.

"നമ്മുടെ കാട്ടിൽ മറ്റൊരു സിംഹമോ? എവിടെയാണ് ഒളിച്ചിരിക്കുന്നത്?" " ആ ധിക്കാരിയെ കാണിച്ചു തരാം " എന്നു

പറഞ്ഞ് മുയൽ മുന്നിൽ നടന്നു. അലറിക്കൊണ്ട് സിംഹം പിന്നാലെയും.

മുയൽ ആഴമുള്ള ഒരു കിണറ്റിനരികിലെത്തി." ആ സിംഹം ഈ കിണറ്റിലാണ് ഒളിച്ചിരിക്കുന്നത്." മുയൽ പറഞ്ഞു. ഉടനെ സിംഹം കോപത്തോടെ കിണറ്റിനുള്ളിലേക്കു നോക്കി.തെളിഞ്ഞ വെള്ളത്തിലതാ ഒരു സിംഹം തുറിച്ചു നോക്കുന്നു. കോപത്തോടെ സിംഹം അലറി. എന്നെപ്പോലെ നീയും അലറുന്നോ ? എന്ന് പറഞ്ഞു സിംഹം കിണറ്റിലേക്കെടുത്തുചാടി മണ്ടനായ സിംഹം ചത്തുപോയി.അങ്ങനെ കാട്ടിലെ മൃഗങ്ങൾക് എല്ലാം സന്തോഷമായി.

ഗുണപാഠം :: ബുദ്ധിയാണ് ബലം.ബുദ്ധിയില്ലെങ്കിൽ ബലവും നിഷ്പ്രഭമാണ്.

The picture cards used are as follows: