Developing Vocabulary List For 4-6 Years Old Tulu Speaking Children

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ABSTRACT

Vocabulary development is a crucial component of language acquisition and significantly contributes to children's communication and academic performance. However standardized vocabulary assessment tools for Tulu-speaking children are limited. Therefore, the present study aimed to develop a vocabulary list for typically developing (TD) Tulu-speaking children aged 4–6 years and to examine age-related differences in vocabulary acquisition across various semantic categories. A total of 26 TD Tulu-speaking children participated in the study including 13 children in the 4–5 years age group and 13 children in the 5–6 years age group. A structured vocabulary checklist based on parental reports was developed comprising categories such as animals, birds, fruits, vegetables, food items, vehicles, body parts, toys, and common items. Parents identified whether each word was present or absent in their child's expressive vocabulary and the obtained data were analyzed using mean, standard deviation, percentage analysis, and independent sample *t*-tests. The results demonstrated a progressive increase in vocabulary performance with advancing age with children in the 5–6 years age group showing higher mean scores across most semantic categories. Furthermore, statistically highly significant differences were observed in the majority of vocabulary domains indicating substantial lexical growth between the two age groups although categories such as trees and verb modifiers did not show significant differences. Additionally, the developed Tulu vocabulary list may serve as a culturally appropriate clinical tool for identifying children at risk for receptive and expressive language difficulties.

Developed vocabulary list may also provide speech-language pathologists (SLPs) with a culturally relevant resource for evaluating expressive vocabulary in Tulu-speaking children. In the absence of standardized assessment tools, such language-specific measures can support the early identification of vocabulary delays and

facilitate evidence-based intervention planning. Consequently, the present vocabulary list has the potential to enhance clinical assessment, monitor language development and support effective service delivery for Tulu-speaking children.

Keywords
Tulu-speaking children, Vocabulary development, Parental report, Language acquisition, vocabulary test.

INTRODUCTION

Language acquisition is a systematic developmental process that occurs gradually throughout early childhood (Rice, 2003). This developmental trajectory follows an ordered hierarchical structure with early foundational stages serving as prerequisites for more complex language functions. In this regard vocabulary plays an important role as a basic element of language. It provides a semantic framework for children to encode and communicate meaning and without an adequate vocabulary, communication remains ineffective or limited (Nemati, 2008).

Meaningful vocabulary marks an important stage in language development because it represents the transition from prelinguistic communication to purposeful language use (Mallikarjun, 2002). Furthermore, the relationship between vocabulary and language is reciprocal. Vocabulary acquisition facilitates the expansion of grammar and syntax while increased language use simultaneously enriches vocabulary knowledge (Nation, 1993). This interdependence highlights the importance of developing a strong vocabulary in early childhood as it supports effective communication, literacy development and academic success later in life (Owens, 2016).

Vocabulary acquisition is a fundamental aspect of language development as it enables children to understand, interpret and express ideas effectively. The development of a strong vocabulary during early childhood plays a crucial role in communication, cognitive growth, literacy and later academic achievement. Therefore, assessment of vocabulary provides valuable insight into a child's overall language abilities, particularly during critical stages of development. Among the various methods available for evaluating vocabulary in young children, parent-report measures are widely recognized and extensively used in child language research across different linguistic and cultural contexts (Fenson et al., 2007). Parents are considered reliable observers of their children's language and behavioral milestones and are able to provide ecologically valid information regarding everyday language use. In addition, parent-report measures allow researchers to obtain large amounts of data in a cost-effective and time-efficient manner without requiring extensive clinical observation or specialized personnel. Consequently, vocabulary information obtained through parental reports has been shown to closely reflect children's actual language performance, thereby supporting the reliability and validity of this approach in early language assessment.

Measurement of vocabulary during infancy and early childhood also provides important information regarding overall language development. Parent-report methods continue to be one of the most established approaches for assessing vocabulary skills in young children and have been widely employed in developmental language studies (Fenson et al., 2007). Since parents regularly observe their child's communication behaviors in natural

environments, they contribute meaningful and representative information about lexical development. Furthermore, parent-report tools facilitate the collection of comprehensive language data while minimizing the need for prolonged assessment procedures. These measures are particularly advantageous in studies involving large or culturally diverse populations due to their accessibility and adaptability. Previous research has consistently demonstrated that parental reports accurately correspond with children's actual language abilities, thereby reinforcing their clinical and research utility in vocabulary assessment.

Age range of 4–6 years represents a significant period for speech and language development during which children exhibit rapid progress in vocabulary acquisition, sentence formation and expressive communication. During this stage, children develop the ability to communicate ideas effectively, participate in social interactions, and engage in early academic activities. However some children may experience speech and language difficulties including articulation disorders phonological difficulties, and language delays, which can negatively influence communication, social participation and academic readiness (Owens, 2016; Paul & Norbury, 2012).

Vocabulary development is a fundamental component of early language acquisition and contributes significantly to children's cognitive, social and academic growth. The initial stages of vocabulary development generally emerge during the preschool and early school years when children begin associating words with meanings and using them in meaningful contexts (Bloom & Lahey, 1978). As language abilities expand, children experience rapid vocabulary growth often referred to as a "vocabulary explosion," during which increasing of grammatical structures supports the acquisition and use of new words (Nelson, 1973). Although vocabulary learning is considered one of the more challenging aspects of language development, it remains essential for effective communication and language proficiency (Nation, 2001). Furthermore, vocabulary knowledge plays a crucial role in reading comprehension and serves as an important predictor of literacy and academic achievement (Cynthia & Johnson, 2004).

Speech-language pathologists (SLPs) play an important role in the development and application of a Tulu vocabulary list by supporting early identification of vocabulary delays and providing culturally appropriate language assessment for children. In multilingual populations SLPs must differentiate language differences from language disorders, particularly when standardized tools are limited (American Speech-Language-Hearing Association [ASHA], 2020). A Tulu vocabulary list can assist SLPs in assessing expressive vocabulary, planning intervention and identifying children at risk for receptive and expressive language difficulties. Such language-specific tools also promote accurate assessment and effective clinical management in Tulu-speaking populations (Paul & Norbury, 2012).

Fenson et al. (1994) conducted a large-scale normative study examining variability in early communicative development using the MacArthur Communicative Development Inventories (CDIs). The study included parental reports from 1,803 children between 8 and 30 months of age. Through structured checklists, the authors documented patterns of vocabulary growth, gesture use and early grammatical development. Their findings demonstrated substantial individual variability in early vocabulary size among typically developing (TD)

children. Importantly the study established parental report as a reliable and valid method for capturing early lexical and communicative development.

Dale and Fenson (1996) further extended this work by analyzing CDI data from over 1,100 children aged 16–30 months to establish normative data for expressive vocabulary development. They generated age-based percentile norms and developmental growth curves illustrating how vocabulary size increases systematically with age. Their findings provided one of the most comprehensive normative references for early lexical development in English-speaking children and reinforced the usefulness of structured vocabulary checklists in large-scale developmental studies.

Fenson et al. (2000) developed and validated short-form versions of the MacArthur CDI for both infants and toddlers. These shortened versions primarily focused on vocabulary items and were designed for rapid screening purposes rather than detailed language profiling. The authors reported strong correlations between the short forms and the full-length inventories demonstrating that brief vocabulary checklists can effectively identify children at risk for language delays while maintaining acceptable reliability and validity.

Dunn and Dunn (1997; 2007 editions) developed Peabody Picture Vocabulary Test (PPVT) have been widely used to evaluate receptive vocabulary in children and adults. The PPVT requires children to identify a picture corresponding to a spoken word, thereby assessing receptive lexical knowledge. It serves as a screening tool for estimating vocabulary ability identifying potential language delays and monitoring developmental progress. The widespread use of the PPVT in clinical and educational settings demonstrates the central role of vocabulary assessment in early language evaluation.

Law and Roy (2008) reviewed the effectiveness of parental report instruments in assessing early language development. Their findings indicated that parents are generally accurate reporters of their child's vocabulary and communication skills when structured checklists are used. The review concluded that parental report measures are both cost-effective and practical for large-scale studies offering a reliable alternative to time-intensive direct assessments, particularly in community-based research settings.

Marchman et al. (2023) provided an updated overview of the MacArthur–Bates Communicative Development Inventories highlighting their widespread use across multiple languages and cultural contexts. The authors emphasized the adaptability of CDI-based instruments and discussed how large-scale databases such as Wordbank have enabled cross-linguistic comparisons of early vocabulary development. Their work underscores the global applicability of parent-report vocabulary tools and supports the development of language-specific adaptations in diverse linguistic communities.

In Marathi, Tamhane (1965), as cited in Mallikarjun (2002) investigated the recognition and reproduction vocabulary of primary school children. The study categorized vocabulary into formation vocabulary across the age groups of 6–8 years and 8–10 years. The total general vocabulary for children between 6 and 10 years was reported to be approximately 4,550 words. Specifically, reproduction vocabulary consisted of 1,705 words for children aged 6–8 years and 1,057 words for those aged 8–10 years. In contrast, recognition vocabulary was 755

words for the 6–8-year group and 2,090 words for the 8–10-year group. The findings highlighted progressive vocabulary growth with increasing age.

In Tamil, Arunjate and Srinivasachari (1968) as cited in Mallikarjun (2002), examined the functional vocabulary of Tamil-speaking children aged 4–7 years with the objective of supporting reading and writing development. The study suggested that preschool children possessed a functional vocabulary ranging between 1,500 and 2,000 words, emphasizing the importance of early vocabulary enrichment for literacy acquisition.

In Tripuri, Karapurkar (1974) as cited in Mallikarjun (2002) documented the active vocabulary of children aged 4–10 years speaking the Debbarama dialect. The findings revealed a steady increase in vocabulary size with age. Children aged 4+ years had an active vocabulary of approximately 260 words, which increased to 430 words at 6+ years, 544 words at 8+ years and 732 words at 10+ years. The study underscored the developmental progression of vocabulary acquisition across childhood.

Pasricha and Das (2002) analyzed the written vocabulary of sixth-grade children in Delhi schools. The study included 527 students from 12 schools representing diverse socioeconomic backgrounds. Written compositions were collected and analyzed to determine basic vocabulary usage. The results indicated that girls performed better than boys within the same socioeconomic group. Although students from lower socioeconomic backgrounds demonstrated comparatively weaker language performance than those from higher socioeconomic groups, the proportion of different words used across groups remained similar.

Vishnu (2007) constructed a vocabulary list for Malayalam-speaking children using parental reports. Parents identified commonly used words from a structured list and the frequency of usage was documented. The results of the study revealed that parent-reported vocabulary lists can effectively assist in early identification of language delays and provide support for speech-language intervention.

Meghana (2015) developed a vocabulary list for Kannada-speaking children based on parental reports of frequently used words within the household environment. Parents were provided with a predefined list and asked to indicate the frequency of word usage. The resulting vocabulary list served as a useful clinical tool for early language assessment and intervention planning.

Preethika and Gupta (2023) developed a vocabulary list comprising 455 words for TD Tulu-speaking children aged 2–4 years, based on parental report measures. The findings indicated that vocabulary growth increased significantly with age within the 2–4-year range. The results suggested that the Tulu vocabulary list could serve as a valuable clinical tool for identifying children at risk of language impairments, particularly those with receptive and expressive vocabulary deficits.

Need of the study

Tulu-speaking population, which is largely concentrated in coastal Karnataka, there is a lack of standardized tools for evaluating early vocabulary development. Hence developing a vocabulary test in the Tulu language is

therefore a key objective of the current study. This detailed Tulu vocabulary list provides a reliable baseline in identifying language delays and vocabulary deficits in Tulu speaking children.

METHODOLOGY

Aim of the study:

The present study aims to develop vocabulary list for Tulu-speaking children aged 4-5 years (Group I) and 5- 6 years (Group II), based on parent report. 26 parents and TD children participated in the study. The vocabulary test includes a comprehensive list of Tulu words that reflect everyday vocabulary relevant to the target audience. Test items assess various aspects of vocabulary, including word comprehension, word formation, and word association.

The study was conducted in two stages:

1. Formulation of word list
2. Obtaining reports from parents

Formulation of vocabulary list

The list of words in Tulu language was compiled with the help of Tulu dictionaries.

Tulu Grammar Books and other available resources. The vocabulary list consisted of 455 words in 7 main categories, which follows:

Nouns, Verbs, Noun modifiers, Verb modifiers, Pronouns, conjunctions and Others. The word list consisted of receptive and expressive vocabulary for both children 4-5 and 5-6 years old. These were intended to list each child's comprehension and expressive vocabulary.

Obtaining reports from parents:

- Each parent received a copy of the word list.
- The purpose of the study was explained to the parents.
- Parents were asked to mark each word on the list that they
- Parents were required to return a copy of the word list within three days.
- In addition, each parent was encouraged to write additional words not included in the given word list. TD Children were asked to do this only if they understood or completed the task.

Statistical analysis:

Quantitative variables with normal distribution were presented as mean and standard deviation. Comparison between the two age groups was performed using the unpaired *t*-test. SPSS version 23 software was used to analyse the data. The level of significance was set at 5%.

RESULT AND DISCUSSION

The present study aimed to develop a vocabulary list for Tulu-speaking children aged 4–5 years (Group I) and 5–6 years (Group II). A total of 26 children along with their parents participated in the study. The developed vocabulary test included commonly used Tulu words related to everyday communication and assessed aspects such as word comprehension, word formation, and word association.

Table 1:

Descriptive Statistics of Vocabulary Scores Across Semantic Categories Among Tulu-Speaking Children Aged 4–5 Years.

Age		N	Mean	Std. Deviation	Mean(%)
4 - 5yrs	Animals	13	14.92	2.783	59.7
	Birds	13	8.38	1.193	55.9
	Grains/cereals	13	12.08	2.362	60.4
	vegetables/ Spices	13	15.38	1.981	59.2
	Fruits	13	12.00	1.958	63.2
	Food	13	20.85	1.772	57.9
	Vehicles	13	8.85	1.405	59.0
	Insects	13	5.23	1.301	65.4
	Flower	13	5.08	1.320	56.4
	Trees	13	5.92	1.320	65.8
	Kitchen items	13	10.54	2.504	58.5
	Clothes	13	5.69	1.109	51.7
	Accessories	13	6.38	1.193	58.0
	Colours	13	4.23	1.166	60.4
	Family Members	13	7.08	1.115	64.3
	Noun modifiers	13	10.08	1.801	56.0
	Verb modifiers	13	5.08	1.706	63.5
	Pronouns	13	5.08	1.891	56.4
	Conjunctions	13	4.62	1.502	65.9
	Body parts	13	10.08	2.783	59.3
	Toys	13	5.62	2.103	56.2
	Common items	13	13.46	2.696	56.1

FIGURE 1:

Descriptive Statistics of Vocabulary Scores Across Semantic Categories Among Tulu-Speaking Children Aged 4–5 Years.

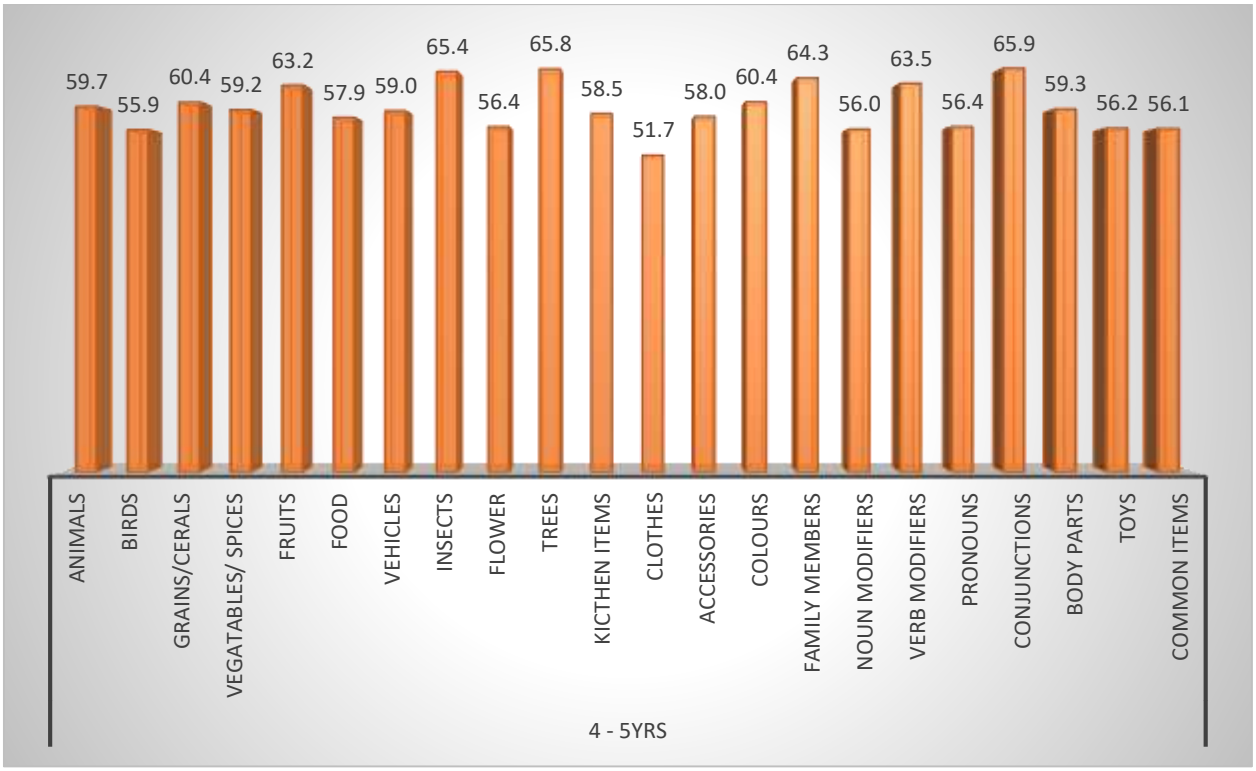

Table 1 and Figure 1 show the descriptive statistics of vocabulary performance across different semantic categories among Tulu-speaking children aged 4–5 years. The results revealed variability in vocabulary acquisition across the semantic domains. Among all the categories conjunctions demonstrated the highest mean percentage score of 65.9% followed by trees (65.8%), insects (65.4%), family members (64.3%), and verb modifiers (63.5%). Similarly, fruits showed a mean percentage score of 63.2% whereas grains/cereals and colors demonstrated 60.4% each.

In contrast lower mean percentage scores were observed for clothes (51.7%), birds (55.9%), noun modifiers (56.0%) and common items (56.1%). Furthermore, categories such as animals, vegetables/spices, food items, vehicles, accessories, kitchen items and body parts demonstrated moderate vocabulary performance ranging between 57% and 60%. Overall, the findings indicate that Tulu-speaking children aged 4–5 years exhibited varying levels of vocabulary acquisition across different semantic categories with comparatively better performance in conjunctions, trees, insects and family members.

Table 2:

Mean Scores and Percentage Analysis of Vocabulary Performance Across Different Semantic Categories in Tulu-Speaking Children Aged 5–6 Years.

Age		N	Mean	Std. Deviation	Mean(%)
5 - 6yrs	Animals	13	19.31	1.494	77.2
	Birds	13	11.92	1.553	79.5
	Grains/Cereals	13	15.85	1.725	79.2
	Vegetables/ Spices	13	21.31	1.750	82.0
	Fruits	13	14.00	1.080	73.7
	Food	13	28.62	1.710	79.5
	Vehicles	13	11.23	1.641	74.9
	Insects	13	6.46	1.050	80.8
	Flower	13	7.08	1.188	78.6
	Trees	13	6.38	1.261	70.9
	Kitchen items	13	13.46	1.761	74.8
	Clothes	13	8.00	1.915	72.7
	Accessories	13	8.69	1.251	79.0
	Colours	13	5.54	1.450	79.1
	Family Members	13	8.62	1.446	78.3
	Noun modifiers	13	13.38	2.501	74.4
	Verb modifiers	13	5.92	1.320	74.0
	Pronouns	13	6.77	1.481	75.2
	Conjunctions	13	5.69	1.032	81.3
	Body parts	13	13.38	1.446	78.7
	Toys	13	8.31	0.947	83.1
	Common items	13	18.85	1.676	78.5

FIGURE – 2

Mean Scores and Percentage Analysis of Vocabulary Performance Across Different Semantic Categories in Tulu-Speaking Children Aged 5–6 Years.

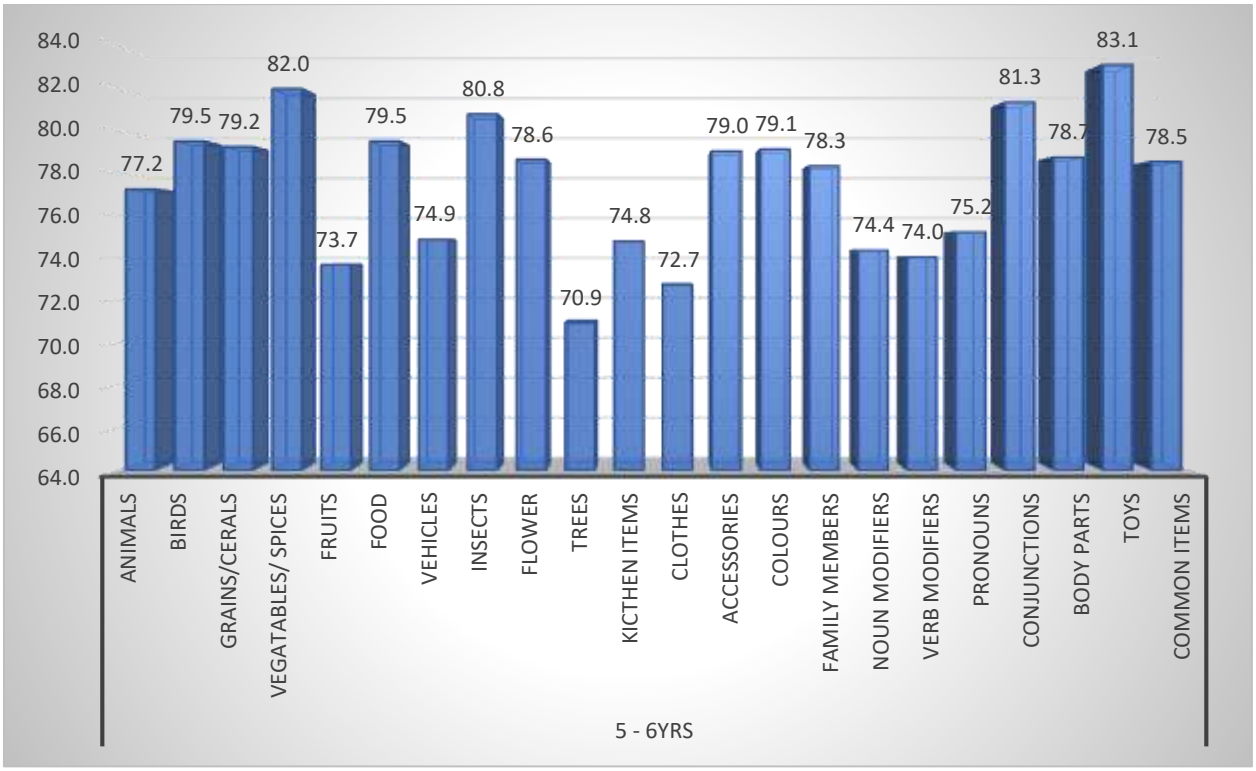

Table 2 and Figure 2 illustrate the vocabulary performance of Tulu-speaking TD children aged 5–6 years across different semantic categories. The analysis showed that children in this age group demonstrated higher vocabulary acquisition in most of the domains. The highest mean percentage score was observed for toys (83.1%) followed by vegetables/spices (82.0%), conjunctions (81.3%) and insects (80.8%). In addition, categories such as birds and food items showed a mean percentage score of 79.5% whereas grains/cereals, colors, accessories, body parts and common items also demonstrated comparatively high vocabulary performance.

On the other hand relatively, lower scores were observed for trees (70.9%), clothes (72.7%), fruits (73.7%), and verb modifiers (74.0%). Categories including vehicles, kitchen items, noun modifiers, and pronouns demonstrated average vocabulary performance ranging between 74% and 75%. The findings therefore suggest that children aged 5–6 years possess a broader expressive vocabulary across several semantic categories with better lexical performance observed particularly in toys, vegetables/spices, conjunctions, and insects.

Table 3:

Comparison of Vocabulary Performance Across Semantic Categories Between Tulu-Speaking Children Aged 4–5 Years and 5–6 Years Using Independent Sample t-Test.

						To compare between the groups		
Age		N	Mean	Std. Deviation	Mean(%)	t value	p	
Animals	4 - 5yrs	13	14.92	2.783	59.7	-5.006	0.000	HS
	5 - 6yrs	13	19.31	1.494	77.2			
Birds	4 - 5yrs	13	8.38	1.193	55.9	-6.516	0.000	HS
	5 - 6yrs	13	11.92	1.553	79.5			
Grains/cereals	4 - 5yrs	13	12.08	2.362	60.4	-4.647	0.000	HS
	5 - 6yrs	13	15.85	1.725	79.2			
vegetables/ Spices	4 - 5yrs	13	15.38	1.981	59.2	-8.079	0.000	HS
	5 - 6yrs	13	21.31	1.750	82.0			
Fruits	4 - 5yrs	13	12.00	1.958	63.2	-3.225	0.004	HS
	5 - 6yrs	13	14.00	1.080	73.7			
Food	4 - 5yrs	13	20.85	1.772	57.9	-11.375	0.000	HS
	5 - 6yrs	13	28.62	1.710	79.5			
Vehicles	4 - 5yrs	13	8.85	1.405	59.0	-3.980	0.001	HS
	5 - 6yrs	13	11.23	1.641	74.9			
Insects	4 - 5yrs	13	5.23	1.301	65.4	-2.654	0.014	Sig
	5 - 6yrs	13	6.46	1.050	80.8			
Flower	4 - 5yrs	13	5.08	1.320	56.4	-4.061	0.000	HS
	5 - 6yrs	13	7.08	1.188	78.6			
Trees	4 - 5yrs	13	5.92	1.320	65.8	-0.911	0.371	NS
	5 - 6yrs	13	6.38	1.261	70.9			
Kitchen items	4 - 5yrs	13	10.54	2.504	58.5	-3.443	0.002	HS
	5 - 6yrs	13	13.46	1.761	74.8			
Clothes	4 - 5yrs	13	5.69	1.109	51.7	-3.760	0.001	HS
	5 - 6yrs	13	8.00	1.915	72.7			
Accessories	4 - 5yrs	13	6.38	1.193	58.0	-4.814	0.000	HS
	5 - 6yrs	13	8.69	1.251	79.0			
Colours	4 - 5yrs	13	4.23	1.166	60.4	-2.534	0.018	Sig
	5 - 6yrs	13	5.54	1.450	79.1			
Family Members	4 - 5yrs	13	7.08	1.115	64.3	-3.038	0.006	HS
	5 - 6yrs	13	8.62	1.446	78.3			
Noun modifiers	4 - 5yrs	13	10.08	1.801	56.0	-3.869	0.001	HS
	5 - 6yrs	13	13.38	2.501	74.4			
Verb modifiers	4 - 5yrs	13	5.08	1.706	63.5	-1.414	0.170	NS
	5 - 6yrs	13	5.92	1.320	74.0			
Pronouns	4 - 5yrs	13	5.08	1.891	56.4	-2.540	0.018	Sig
	5 - 6yrs	13	6.77	1.481	75.2			
Conjunctions	4 - 5yrs	13	4.62	1.502	65.9	-2.131	0.044	Sig
	5 - 6yrs	13	5.69	1.032	81.3			
Body parts	4 - 5yrs	13	10.08	2.783	59.3			

	5 - 6yrs	13	13.38	1.446	78.7	-3.803	0.001	HS
Toys	4 - 5yrs	13	5.62	2.103	56.2	-4.208	0.000	HS
	5 - 6yrs	13	8.31	0.947	83.1			
Common items	4 - 5yrs	13	13.46	2.696	56.1	-6.116	0.000	HS
	5 - 6yrs	13	18.85	1.676	78.5			

HS- Highly significant, S- Significance

Figure- 3

Comparison of Vocabulary Performance Across Semantic Categories Between Tulu-Speaking Children Aged 4–5 Years and 5–6 Years Using Independent Sample t-Test.

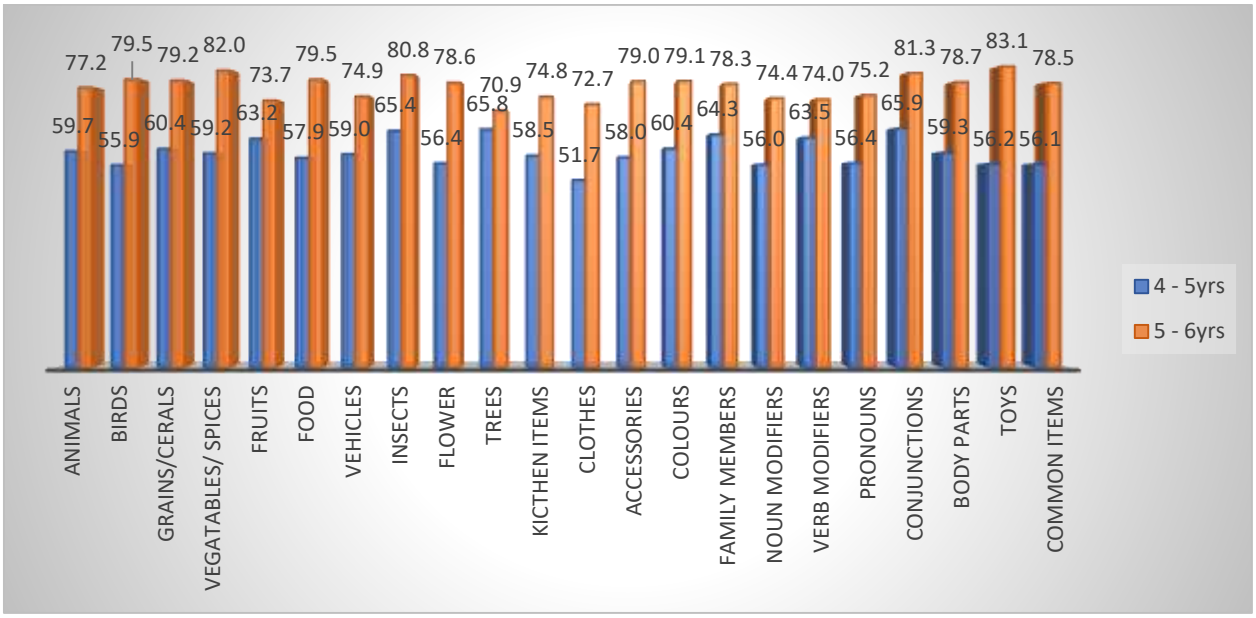

Table 3 and Figure 3 depict the comparison of vocabulary performance between Tulu-speaking TD children aged 4–5 years and 5–6 years across different semantic categories. The findings demonstrated that children in the 5–6 years age group obtained higher mean scores than children in the 4–5 years age group across all vocabulary domains indicating progressive lexical development with advancing age. The analysis further revealed that semantic categories such as animals, birds, grains/cereals, vegetables/spices, food items, accessories, toys and common items demonstrated statistically highly significant differences between the two age groups with all the above respective variables showing the same significance value of (p = 0.000). Similarly, fruits (p = 0.004), vehicles (p = 0.001), flowers (p = 0.000), kitchen items (p = 0.002), clothes (p = 0.001), family members (p = 0.006), noun modifiers (p = 0.001), and body parts (p = 0.001). These findings suggest that vocabulary acquisition

improves considerably with age and that children aged 5–6 years possess a broader expressive vocabulary across multiple semantic categories when compared to children aged 4–5 years.

In addition, significant differences were identified in insects ($p = 0.014$), colors ($p = 0.018$), pronouns ($p = 0.018$), and conjunctions ($p = 0.044$). However, trees ($p = 0.371$) and verb modifiers ($p = 0.170$) did not reveal statistically significant differences between the groups. Overall, the comparison indicates that vocabulary acquisition improves considerably with advancing age among Tulu-speaking typically developing TD children with the 5–6 years age group exhibiting superior vocabulary performance across most semantic categories when compared to the 4–5 years age group.

DISCUSSION

The present study aimed to develop a vocabulary list for Tulu-speaking children aged 4–6 years and to examine age-related differences in vocabulary acquisition across various semantic categories. The findings revealed a steady increase in vocabulary performance with advancing age, with children aged 5–6 years demonstrating higher mean scores across most semantic domains compared to children aged 4–5 years. This finding supports earlier studies by Fenson et al. (1994), Dale and Fenson (1996), and Karapurkar (1974), which reported progressive vocabulary growth among TD children.

Among the semantic categories vegetables/spices, food items, toys, conjunctions, insects and body parts showed comparatively higher vocabulary performance in the 5–6 years age group. In contrast categories such as clothes, birds, noun modifiers and common items demonstrated relatively lower scores in the 4–5 years age group, suggesting that vocabulary acquisition differs according to familiarity, frequency of usage, and environmental exposure. Similar findings were reported by Meghana (2015) and Vishnu (2007) who emphasized that parental report vocabulary lists effectively reflect children's everyday linguistic environment.

Statistical analysis demonstrated highly significant differences between the two age groups in most semantic categories including animals, birds, vegetables/spices, food items, accessories, toys, and common items. Significant differences were also observed for insects, colors, pronouns, and conjunctions whereas trees and verb modifiers did not show statistically significant differences. These findings indicate that lexical development progresses rapidly during the preschool years although certain semantic categories may be acquired earlier and remain stable across age groups.

The present findings also support the reliability of parental report measures in assessing vocabulary development as reported by Law and Roy (2008). Furthermore, the results are consistent with the study by Preethika and Gupta (2023), who observed age-related vocabulary growth among Tulu-speaking children aged 2–4 years. Therefore, the developed Tulu vocabulary list may serve as a culturally appropriate clinical screening tool for identifying children at risk for receptive and expressive language difficulties.

SUMMARY & CONCLUSION

The current study aimed to develop a parent-report-based vocabulary list for Tulu-speaking children aged 4–6 years and to examine age-related differences in vocabulary acquisition across various semantic categories. A total of 26 TD children participated in the study including 13 children in the 4–5 years age group and 13 children in the 5–6 years age group. The developed vocabulary checklist consisted of commonly used Tulu words related to categories such as animals, birds, grains/cereals, vegetables/spices, fruits, food items, vehicles, insects, flowers, trees, kitchen items, clothes, accessories, colors, family members, noun modifiers, verb modifiers, pronouns, conjunctions, body parts, toys, and common items. Parents were asked to indicate whether the words were present or absent in their child's expressive vocabulary.

The findings of the current study demonstrated that vocabulary acquisition improved progressively with increasing age. Children in the 5–6 years age group obtained higher mean scores across almost all semantic categories when compared to children in the 4–5 years age group. Comparatively higher vocabulary performance was observed for categories such as vegetables/spices, food items, toys, conjunctions, insects, and body parts in the older age group whereas relatively lower scores were noted for clothes, birds, noun modifiers, and common items in the younger age group. Statistical analysis revealed highly significant differences between the two age groups in most semantic categories while trees and verb modifiers did not demonstrate statistically significant differences. These findings indicate that vocabulary development progresses rapidly during the preschool years and varies across semantic domains depending on communicative exposure and frequency of usage.

The present study also supports the effectiveness of parental report measures in assessing vocabulary development among young children. Furthermore, the findings are consistent with previous literature reporting age-related lexical growth among TD children. Therefore, the developed Tulu vocabulary list may serve as a culturally and linguistically appropriate clinical tool for identifying children at risk for receptive and expressive language difficulties.

LIMITATIONS OF THE STUDY

- The study included a small sample size of 26 Tulu-speaking children which limits generalization of the findings.
- Vocabulary assessment was based on parental reports and may be influenced by subjective responses.
- The study was restricted to selected semantic categories and a specific geographical population of Tulu speakers.

FUTURE DIRECTIONS

- Future studies can include larger samples across different regions for better standardization.
- The vocabulary list can be validated for clinical assessment of Tulu speaking children with speech and language disorders.
- Additional linguistic domains such as syntax, morphology, and pragmatics can be incorporated into future assessments.
- Longitudinal studies can be conducted to examine vocabulary growth and the influence of environmental and bilingual factors on language development.

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