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# Conjunction, Comparatives and Quotatives in Kannada Speaking Children with Intellectual Disability

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## Introduction

Language development is a complex and essential aspect of human cognition that significantly improves our communication and interaction with the outside world. There are certain populations, such as children with intellectual disability (CWID), who experience delays or impairments in language development. Intellectual disability is characterized by significant limitations in intellectual functioning and adaptive behaviour, which impact many facets of daily life, including language skills.

However, there is a dearth of research in the Indian context that focuses on the language and communication aspects of CWID. Although speech-language pathology in India has demonstrated an awareness of changing theoretical perspectives and linguistic aspects in typically developing and language-disordered populations, there is a need to understand the language skills of children with intellectual disabilities (CWID) in order to provide appropriate assessment and intervention. Conjunction is a part of speech that connects words, sentences, phrases, or clauses. A discourse connective is a conjunction joining sentences. This definition may overlap with that of other parts of speech, so what constitutes a "conjunction" must be defined for each language.

# http://grammar. yourdictionary.com/parts-of-speech/conjunctions/conjunctions.html

Silva and Marilyn (1987) investigated acquisition of conjunction in 26 adults and 71 children aged 4 to 11 were asked to tell a story about three sets of story pictures. The result showed that there is clear increase in the frequency of subordinate conjunctions with age, with subjects under 7 using only "when" and "because," conjunctions already present in the speech of toddlers.

Comparison is a mental act by which two or more items are examined in order to assess similarities and differences between them. The comparison can be made with regard to a certain gradable, one-dimensional property, and the items are then assigned a position on a predicative scale. This mental act of comparison finds its linguistic encoding in comparison constructions, especially comparative constructions for the expression of comparison of inequality or equative constructions for the expression of equality

Stolz (2013) provides a very detailed and informative review of earlier studies of comparative constructions to which I have little to add and which I encourage the reader to consult. In the following, I thus only summarize the comparative typologies by Stassen (1985) and Dixon (2012). Subsequently, the major works on superlative, equative and similative constructions are discussed in order to lay out the state of the art.

This comparative study seeks to address this knowledge gap by comparing the language development of children with intellectual disability in the Indian context to that of typically developing children. This research will contribute vital insights to the field of speech-language pathology in India by investigating the unique difficulties and specific impairments experienced by CWID. The findings will aid in the comprehension of the linguistic profiles of CWID, inform more targeted assessment strategies, and facilitate the development of effective intervention techniques.

Understanding the linguistic abilities of individuals with CWID is crucial, as language deficits can have a significant impact on their daily functioning and social interactions. This study will provide a comprehensive comprehension of the language development in CWID

within the Indian cultural and linguistic context by examining the linguistic profiles of children with intellectual disability (CWID) and comparing them to typically developing children. Ultimately, the findings will contribute to the improvement of assessment and intervention practices for CWID in India, thereby enhancing their communication and social participation.

## **Review of Literature**

Communication is a process of exchange of ideas between senders and receivers. It involves message transmission and response or feedback (Beebe, Beebe and Redmond, 1996).

Language is defined as "a code whereby ideas about the world are represented by a conventional system of symbols for communication" (Bloom and Lahey, 1978). Language constitutes both a set of symbols (codes) and set of procedures (rules), which combine to form words, phrases and sentences and used for the communication. The language components are phonology, morphology, syntax, semantics and pragmatics. Phonology refers to the sound system of a particular language, the regularities and rules governing pronunciations of words, phrases and sentences (Good luck, 1991). Morphology is a study of morphemes, which can be described as the smallest segment of speech that carriers meaning (Good luck, 1991; Matthews, 1999).

The order or arrangement of words is referred to as syntax. This layout highlights significant relationships both inside and between sentences. The majority of syntactic research has concentrated on the relationships conveyed at the sentence level (i.e., sentence comprehension). The most essential grammatical relationships are provided here (Crystal, 1987).

Conjunctions are one of the most crucial parts of syntax. Because they are a common way of linking words or portions of sentences together, conjunctions are a significant method of increasing sentence length and complexity. Conjunctions are little words, yet they are extremely functional and essential for sentence construction.

Conjunctions are classified into several types.

- conjunctions that coordinate
- conjunctive adverbs
- correlative conjunctions

• subordinating conjunctions

Ziemer (1884) and Jensen (1934) wrote the first cross-linguistic works on comparative constructions. Ultan (1972) studies universals in comparative, superlative, and equative constructions worldwide using a global sample of 123 languages. Most recent typologies of comparison constructs start with Ultan's work and evaluate, test, and refine assumptions that he has proposed the alternative terms found in the literature on comparison.

COMPAREE = what is being compared against some standard of comparison (Mary); alternative terms used in the literature: ITEM COMPARED (Ultan 1972), TOPIC (Stolz and Stolz 2001, Gorshenin 2012)

STANDARD of comparison = what the comparee is being compared against (Peter)

STANDARD MARKER = marker of the grammatical function of the STANDARD (than), alternative terms used in the literature: MARK (Dixon 2012), MARKER (Greenberg 1966), TIE (Stolz 2013), PIVOT (Cuzzolin and Lehmann 2004), RELATOR (Gorshenin 2012, Stolz and Stolz 2001)

PARAMETER of comparison = property of comparison (tall, intelligent); alternative terms used in the literature: QUALITY or QUANTITY (Ultan 1972), QUALITY (Stolz 2013), COMMENT (Gorshenin 2012, Stolz and Stolz 2001), (COMPARATIVE) PREDICATE (Heine 1997, Stassen 1985, Stassen 2013)

DEGREE MARKER or PARAMETER MARKER marks the degree of presence or absence of a property in the comparee (more or -er); alternative terms used in the literature: INDEX (Dixon 2012), DEGREE (Stolz 2013, Gorshenin 2012, Stolz and Stolz 2001), COMPARATIVE CONCEPT (Heine 1994)

## **Western Studies**

Brown (1973) investigated the acquisition of grammatical morphemes as well as the acquisition of meaning modulations expressed in spontaneous speech. He investigated 14 grammatical morphemes, including two prepositions, two nouns, inflections, articles, auxiliary verbs, third person, verb tense markers, contractive copula, and present singular, irregular, and regular tense forms, and found that each morpheme is acquired gradually. The percentage of

obligatory context in which the morphemes occur grows over a few weeks, and for several other tasks, it increases over a few months or years.

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Stolz (2013) provides a very detailed and informative review of earlier studies of comparative constructions to which I have little to add and which I encourage the reader to consult. In the following, we thus only summarize the comparative typologies by Stassen (1985) and Dixon (2012). Subsequently, the major works on superlative, equative and similative constructions are discussed in order to lay out the state of the art.

# **Indian Studies**

Rukmini (1994) created the Malayalam Language Test for children aged 4 to 7 years. The test is divided into two sections: semantics and syntax. Except for semantic discrimination (just reception) and lexical category (only expression), each section comprises 11 subsections with five items for expression and reception. The test was given to 90 Malayalam-speaking youngsters between the ages of 4 and 7. There were thirty youngsters divided into three age groups: 4-5 years, 5-6 years, and 6-7 years. Findings revealed that the scores increased with age. The receiving problem was more difficult for the children than the expressing challenge. They also outperformed semantic tasks on syntactic tests

Vijayalakshmi (1981) tested children between ages 1 to 5 years with the test of acquisition of syntax (TASK) in Kannada and reported that children use case, tense, gender, plural, conjunctions, adverb and adjectives all of which rose in frequency with increase in age.

In Dravidian languages, an universal quantifier invariably takes the conjunction marker um/ - a morphological encoding of the logical fact that universal quantification is an infinite conjunction (Madhavan, 1988).

### Methodology

## Aim and Objective

The study aims at profiling language in children with intellectual disability speaking Kannada (mental age 4 to 6 years). Analyzing the data at levels of language functioning – Predicates as compared to mental age matched typical children.

#### Participants with Inclusive and Exclusive Criteria

Participants included 30 typical children (TD) in the age range of 4 to 6 years and 30 Children with Intellectual disability (CWID) (Mental age 4 to 6 years)

Typical children establishing profiles of TD was found necessary because of the need for comparison with CWID. Currently extensive developmental data in typical children speaking Kannada is not available. Moreover, establishment of norms based on free conversational samples is rare. Hence, a preliminary performance description of normal children in the age range of 4 to 6 years was considered essential.

All the children were suggested by teachers who identified the best suited for the study. Children with history of any speech and /or language deficits, any reading and /or writing problems, any history complaint of acquired hearing loss, complaints of cognitive deficits such as poor memory, attention deficits, organizational and /or sequencing issues, any transfer from more than one school, any shift in the medium of instruction and any academic failures were excluded from the study. No formal language testing was administered due to lack of such tests in Kannada language. Consent was obtained from the parents of children before data collection

#### **Materials Used**

Following the guidelines of LARSP (Crystal et.al., 1976 and 1989) and in subsequent Kannada language adaptation (Subbarao, 1995) on sample collection, a set of toys and pictures were selected. Toys and pictures used for sample collection are as shown below.

Toys and play materials– House building set, Toy, jeep, Ball, Toy Utensils, Coins, Travel bag set, Paper-Pencil

List of Pictures --City Road, traffic, Village, life-1 City life, Village Life

Topics for elicited work at school, teachers, response from subjects, Games played with friends, Cinema, Television program, Favourite music, Favourite clothes, Family member.

## Procedure

The study envisaged obtaining an audio & videotaped conversational sample with TD and CWID group. Thus, obtained sample was transcribed analysed and profiled at predicate level. The overall guidelines provided by LARSP (Crystal et. al, 1976 and 1989) and suggestions provided by Subbarao (1995) on the same method in using with CWID speaking Kannada have been used for transcription and analysis of response patterns.3 types of conjunctions /-u:/, /mattu/, /haagu/; comparatives /atva/, /ginta/; and quotatives -/anta/ and other types are selected in this scan. The selectional ordering of elements was based on LPT (Karanth, 1985).

## Examples:

## **Conjunctions:**

/ra: manu: sankaranu: bandru/	Rama and Shankara came Rama also				
shankar also came (they)					
/nanna anna ha: gu: maklu ho: dru/ My elder brother and children went away my elder brother and children went (they)					
/ramesa mattu gane:sa kotru/	Ramesh and Ganesh gave me ramesh and ganesh gave				
Comparatives:					
/pensil atva: penkodu/	Give me either pencil or pen pencil or pengive				
/Pensil ginta: pennu cenna: gide / Pen is better than pencil pencil more					
than pen good is					
Quotatives:					
/madti: ni anta: he: lidru/ They	They said they would do will do so they said				
/i: taraddu bandittu/ This	This type (of something) had come This type come had				

## Analysis

Samples were a combination of conversations with the children and interactive sessions using toys and pictures. Free conversation was encouraged throughout the 30 minutes sessions with each child. The setting was within the familiar environment of the school. The researcher interacted with children before and to become familiar with each other. The first half of the session recording focused on free conversation, while the latter half involved discussions regarding the toys and pictures. The session was recorded using Sony video recorder (Model DCR-3R21E). The Recorder was placed at a distance of three foot from the setting. A quiet room of the special school /school was used for recording. An additional note was taken to indicate accuracy of children's response to stimuli for later use in transcription. Thus, the obtained sample was transcribed, analyzed.

The overall guideline provided by LARSP (Crystal et.al., 1976 and 1989) was used for the transcription of the sample and analysis of response patterns. Suggestions and guidelines provided by an earlier study of language analysis in children with Intellectual disability speaking Kannada using LARSP (Subbarao, 1995) were adapted.

#### **Statistical Analysis**

T' test was used to compare the means of two groups. Z test was used to determine whether two population means are different when the variances are known and the sample size is large, Man Whitney test was used to compare the differences. ANOVA followed by post hoc analysis was done using Bonferroni test. The results are expected to strengthen linguistic profiling of Kannada speaking children with the intellectual disability. Such profiling is expected to increase our understanding of disordered language in this group and also help in planning age-appropriate remediation.

## **Results and Discussions**

Language delays and disorders amongst children have increasingly attracted attention of practicing Speech Language Pathologists in India. One group has consistently demanded attention is Children with Intellectual Disability (CWID). Language behavior of these children has become an important area of research particularly in the Indian context. There are reports of differences between mental age (MA) matched typical children (TD) and children with Intellectual disability (CWID). In fact, it is recognized that the extent of deviance is underestimated (Kiernan, 1985; Subbarao, 1995). The results of the present study also support these views. Although, there is an overall delay in acquiring language, there are differences among the MA matched TD and CWID children. These differences are most noticeable in syntactic aspects as compared to semantic aspects. This assertion further strengthens similar conclusions of Subbarao (1995).

As described in methodology section, all TD and CWID interacted during play to obtain a natural conversational language sample. The transcription of the language samples was subjected to detailed analysis. Initially quantitative analysis was done, followed by analysis of qualitative aspects.

# **Quantitative Analysis**

The transcription of language sample was analysed for the stimulus type and response categories. All the sentences were counted for Therapist (T) and Participants (P). The total numbers of the sentences were counted which yielded three quantitative measures like Total number of sentences, mean number of sentences per time and Mean sentence length; the present measures were compared for both groups of TD and CWID group. The group mean, standard deviation was calculated and significance between the means were calculated using t'test for the unmatched pairs.

	N	Typical	%	Children	%	Testing	Р	Significance
		Children		with		proportions-	value	(at 0.005
				intellectual		z value		level)
				disability				
		No.		No.				
		present		present				
Conjunctions	30	30	100	22	73	3.04	.001	HS
Comparatives	30	22	73	1	3	5.58	.000	HS
Quotatives	30	25	83	0	0	6.55	.000	HS

Table 1.1 -Shows the presence of Conjunction, Comparatives and Quotatives in typical children and children with intellectual disability with statistical evidence.

**HS-Highly Significant** 

Table 4.13 shows that usage of Conjunctions Comparatives, Quotatives was observed in almost all TD group. Conjunction /u: / was mostly used (e.g. /Kailu: chamchdalu: tintini/ (I eat with hands and spoon). Some children also used /mattu/ conjunction (eg: /huli mattu simha friendsu/ (tiger and lion are friends) Examples of comparatives /pencil atva pen beku/ (pencil or pen want) and Quotative - /amele kodtini anta helidru/ (said they will give later). In Subbarao (1995) study 5- to 6-year-old normal children showed the use of conjunction /u:/. The present study differs in the extent with which conjunction, comparative and quotative words are used. It is possible that language development has accelerated in the recent years as exposure to Kannada has increased.

CWID group performed poorly as compared to that of the TD group. 73 % of children showed the use of /mattu/ conjunction which is statistically significant. Subbarao (1995) had shown that only 10% CWID used /u/ conjunction. Such differences indicate probably the dynamic nature of language development. Comparing both the groups it can be ascertained that TD children acquire Conjunctions, Comparatives and Quotatives by 4 to 6years. On the other hand, CWID group showed minimal response. Prema (1979) also reported the usage of conjunction markers in 5 to 6 years old typical children.

#### Discussion

Studies from many diverse disciplines show that as language is a complex structure its use involves many diverse interacting psychological operations (Caplan, 1992). A majority of children acquire this complex system (Language) during their early years. It is generally accepted that interactionist approaches propagated in the late 70's (Bloom and Lahey, 1978; Carrow-Woolfolk and Lynch, 1982) explain language development better than any single theory. This integrated view point suggests that both maturation and behavior of society simultaneously influence and determine linguistics and communicative behavior.

In light of this approach, studying children for describing their linguistic communication in naturally occurring day to day interactions becomes important. It is well accepted that understanding of language and communicative development is an underlying force to enable effective language intervention in children with disability. One of the largest groups in India that require attention is children with Intellectual disability (CWID). The present study is focused on oral expression of the children and analyzing the resulting language

output. Studies of language development have made some headway particularly in Kannada (Karanth, 1990; Subbarao, 1995 and Rohila, 2015).

#### **Summary and Conclusion**

The present study is an extension of previous studies in language profiling of Kannada speaking children with intellectual disabilities (CWID). Most notably, Subbarao (1995) had obtained natural conversational samples of 4 to 6 years mental aged (MA) children with intellectual disability (CWID) and 4 to 6 years matched typical children (TD). The audio sample obtained thus was transcribed and subjected to analysis based on the overall general guidelines provided by LARSP (Crystal et. al, 1976 and 1989).

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