# Predicates in Kannada speaking normal children and with Intellectual Disability

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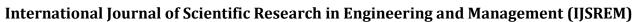
## Abstract

Language acquisition is an everyday and yet magical feat of childhood. During the developmental period the language milestones emerge universally as a continuum across all the components in a predictable sequence, with amazing case unless on interference due to any sensory or motor deficits. Language is made up of socially shared rules that include what words mean. Components of the language are grouped under the 'form' (phonology, morphology, syntax) 'content' (semantics) and 'use' (pragmatics). Morpho-syntactic operations require a comprehending and use of correct word order and organisation in phrases and sentences like PNG markers, tense markers, plural markers, case markers, predicates etc. The study highlights the need to carry out more research in this area for better understanding of language acquisition among these children in order to develop both assessment and intervention programmes. Presently, the lack of acquisition data has hinged the development of any standardized test in Kannada. Hence, the present study aims to explore Predicates in Kannada speaking children with the objective of analysing the data among these children across 4 to 6 years of age. The results suggest that predicates are the part of language development that would come after 6 years.

## Introduction

Human language is a unique mental entity. It is a system of symbols that greatly enhances the ability of humans to represent aspects of the world, to think and to communicate with each other. Studies from many diverse disciplines show that language has a complex structure and that its use involves many diverse interacting psychological operations (Caplan, 1992). Functional communication involving the language code helps us to accomplish specific goals, such as to inform others, relate to events not in our immediate physical environments, to reason, to update our knowledge of the world, to think privately and so on.

Majority of (human) children acquire this complex system - language during their early years. Children appear to be biologically equipped to acquire the language of human type; they encounter languages of rich and complex (and in part similar) grammatical structure in every human society; and they acquire such languages in an

inexorable, age and stage related fashion that does not appear given our current, admittedly imperfect understanding to be explicable on experiential basis but rather looks to be strongly maturational‖ (Flavell, Miller, & Miller, 1993).

**Predicates**

The predicate is the part of the <u>sentence</u> or <u>clause</u> that says what the <u>subject</u> is or isn't doing. In the sentence I ran, the subject is *I*. The subject is the person, place, or thing that is performing an action. The *predicate* in this sentence is *ran* and is the action that the subject is performing.

A predicate always contains a <u>verb</u>, which may actually be a <u>verb phrase</u>. In the sentence *I ran* away from the angry dog, the entire predicate *is* ran away from the angry dog. In this case, the verb *ran* is being modified by a <u>prepositional phrase</u> that says what the subject of the sentence (*I*) was running from.

You can also have a compound predicate, in which one subject is performing more than one action at the same time. In the sentence, my sister studies French and works at a fancy restaurant, the subject *(*my sister*)* is performing two actions *(*studies French and works at a fancy restaurant*).* In this sentence, the two predicates are joined by the <u>conjunction</u>.

Some sentences can be very long and complex, as in after explaining the differences between Batman and Man-Bat, my friend spoke for hours about the long and intricate history of batty superheroes. But just remember that the *predicate* is everything that says what a subject is doing.

**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, Favorite music, Favorite clothes, Family member.

**Procedure**

The study envisaged obtaining an audio & videotaped conversational sample with TD and CWID group. Thus, obtained sample was transcribed analyzed 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.

The0 predicate constructions selected were pronominal, nominal, interrogative and adjectival.

Examples,

Pronominal: /i: pustaka nannadu/ This book is mine this book mine

Nominal: /i: pennu kamalaldu/ This is Kamala _s book this pen Kamala-belongs

Interrogative: /ninna ko: ne ya: vdu? / Which is your room? Your room which one?

Adjectival: /avr na: yi doddu/ Their _s is a big dog Their dog big one

**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) study.

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 analyzed 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.

Show the presence of Predicates among typical children and children with intellectual disability with statistical evidence.

| | N | Typical Children No. present | % | Children with intellectual disability No. present | % | Testing proportions-z value | P value | Significance (at 0.005 level) |
|---|---|---|---|---|---|---|---|---|
| Pronominal | 30 | 6 | 20 | 0 | 0 | 2.58 | 0.005 | HS |
| Nominal | 30 | 1 | 3 | 0 | 0 | 1.01 | 0.157 | NS |
| Interrogative | 30 | 0 | 0 | 0 | 0 | 0 | 0 | NS |
| Adjectival | 30 | 7 | 23 | 6 | 20 | 0.31 | 0.377 | NS |

**NS-No Significance, HS-Highly Significant**

The above table shows the presence of predicates in both TD and CWID group. The TD group used adjectival (e.g. /bardiddu na:nu/ (the one who wrote is me) 23 % which is most used. Pronominal predicates (e.g. /i: pennu avandu/ (this is his pen) were used by only 20% of children. Other types, nominal and interrogative predicates were not used. This suggests that predicates are the part of language development that would come after 6 years. Subbarao (1995) reported similar results. Prema (1979) while studying 5 to 6 year old normal children observed that pro-nominalised sentences were rarely seen. The present study agrees with previous studies. CWID group did not use predicates except adjectival type seen in 20% of children.

When the two groups were compared significant difference was established for pronominal type. There were no differences in other types, confirming that in the language development predicates come after 6 years. Subbarao (1995) also has 91 shown similar results. It could be said that the CWID group may not be expected to use predicate due to delayed language development in them.

## 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 & Lahey, 1978; Carrow-Woolfolk & 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 & 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 & 1989).

Predicates were not used by CWID; except adjective type was seen in about 20% of children. It could be said that predicates develop later than 6 years in the language development. In conditional clauses it was noted that topic/focus is the only structure observed. Affirmative participle construction was used by 50% of CWID group. In these entire aspects CWID group significantly lacks behind in the development as compared to TD group. It appears that CWID differ significantly in the use of semantic intentions when compared with MA matched TD group. Requests for recurrence and cessation were the most difficult intentions. CWID group used Agent+

Action, Action+ object and Possessor +possession type semantic relations (two word phrases).Overall rich variety of semantic aspects even with limited syntactic skills.

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