Transitives, Intransitives and Causatives in Kannada-speaking Normal Children and Intellectual Disability

Dr. Satish Kumaraswamy

Professor and Principal, Dr. MV Shetty College of Speech and Hearing Mangaluru, Karnataka 575013

sat8378@yahoo.com

Ms. Rakshitha S

Post Graduate Student, Dr. MV Shetty College of Speech and Hearing srakshithasgowdas@gmail.com

Abstract

Language is a rule-governed behavior. It is defined as the comprehension and/or use of a **spoken** (i.e., listening and speaking), **written** (i.e., reading and writing), and/or **other communication symbol system** (e.g., American Sign Language). Spoken and written language are composed of receptive (i.e., listening and reading) and expressive (i.e., speaking and writing) components. Spoken language, written language, and their associated components (i.e., receptive and expressive) are each a synergistic system comprised of individual language domains (i.e., phonology, morphology, syntax, semantics, pragmatics) that form a dynamic integrative whole (Berko Gleason, 2005).

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 Transatives, Intransitives and Causatives in Kannada speaking normal children and Intellectual Disability 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 Kannada speaking typically developing children with the objective of analysing the data among these children across 4 to 6 years of age. The results revealed that most of these markers were developed by 5 to 6 years of age.

Introduction

Language is the comprehension and/or use of a spoken, written and/or communication symbol system. As language is a complex and dynamic system of conversation symbols that is used in various modes for thought and communication. Higher order language skills include

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inferencing; comprehension monitoring; interpretation of complex language, such as jokes and puns; and use of text structure knowledge. **Metalinguistic awareness** is requisite for the development of higher order language skills and is defined as "the ability to think about and reflect upon language" (Gillon, 2004, p. 10). Metalinguistic awareness includes phonological awareness, morphological awareness, syntactic awareness, semantic awareness, and pragmatic awareness. Metalinguistic skills are also critical for self-regulation and self-monitoring.

A verb can be described as a *transitive*, or an *intransitive* based on whether it requires an object to express a complete thought or not. A transitive verb is one that only makes sense if it exerts its action on an object. An intransitive verb will make sense without one. Some verbs may be used both ways. The word *transitive* often makes people think of *transit*, which leads to the mistaken assumption that the terms *transitive* and *intransitive* are just fancy ways of describing action and non action. But these terms have nothing to do with whether a verb is active or not. A better word to associate when you see *transitive* is *transfer*. A transitive verb needs to *transfer* its action to something or someone—an object. In essence, transitive means "to affect something else."

Causative verbs are verbs that show the reason that something happened. They do not indicate something the subject did for themselves, but something the subject got someone or something else to do for them. The causative verbs are: let (allow, permit), make (force, require), have, get, and help.

Review of Literature

Intellectual disability (ID) is a neuro-developmental disorder characterized by impaired cognitive, social and adaptive functions. Intellectual disability usually originates before 18 years of age and significantly characterized by limitation both in intellectual functioning and in adaptive behavior as expressed in conceptual, social practical and adaptive skills (AAID, 2010; International classification of diseases 10(ICD,10).

The Census of India (2011) revealed that there was a significant increase in number of disabled persons in both rural as well as urban population compared to previous estimates. There was an increase seen in the male and female ratio. The census revealed that 20% of the disabled populations have disability in movement, 19% have disability in seeing, another 19% have disability in hearing, 8% have multiple disabilities and 6% specifically were labeled as intellectually disabled.

A study by Patel (2009) has postulated that disabilities predominantly exist below 15 years of age. The implications of this information for research in communication disorders will

be very significant. He has indicated that the expanded data of language development in typical children and Children with Intellectual disability will expand the scope of research. It is further felt that the data will help us to verify the data veracity across and linguistic and cultural groups.

Kumudavalli (1973) identified the developmental patterns of speech sound discrimination in Kannada language and find the relationship between speech sound articulation and auditory discrimination. Results revealed that there is definite pattern in the development of discrimination and the words differing by more than one distinctive feature were discriminated better than those differing by one.

Sreedevi (1976) studied the aspects of acquisition of Kannada by 2+ years old children found that the additions of negative words (like /- illa/, /be:da/) are acquired earlier than other type of negative markers with modal auxiliaries.

Krupa (2009) compared the semantics intentions across the age group in normally developing children, chronological age (CA) matched and mental age (MA) matched CWID and reports the semantic intentions up to 2 years of age; CWID (MA and CA matched) continued to have similar performance by 3-4 years of age, MA matched children showed the similar performance than CA matched children due to their super cognitive skills, by 4 years of age MA matched CWID showed similar response to typically developing children, which was in contrast to the CA matched CWID. Thus, cognitive development influences language development to the greater extent. However, cognitive development and language development do not have linear relationship.

Need for the Study

Transitive, intransitive and causative studies in the Indian context would aid in assessment and help in establishing the baseline to set goals for intervention in children with disability. The lack of acquisition data has hinged the development of any standardized test in Kannada. The present study attempts to understand Transitive, intransitive and causative the markers in Kannada speaking typical children.

Need for normative data in acquisition of grammar in Kannada language with help of SLP to baseline for assessment as well as rehabilitation.

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 – Transatives, Intransitives and Causatives as compared to mental age matched typical children.

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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

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 bagset, 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 members.

Procedure

The study envisaged obtaining an audio & videotaped conversational sample with TD and CWID group. 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.

In this scan verb relationships to dependent elements in a sentence structure are explored. Apart from transitive and intransitive verbs, causative /-isu/ was included. Here too the presence or absence of such verb forms is noted. Some examples are given below:

Transitive: /ra: ju a: pustakao: dda/ Raju read that book /avan do: setinda/ he ate up the doses /a: na: yihudgankactu/ that dog bit the boy

Intransitive: /ra: ju bidda/ Raju fell down /avanbanda/ he came

Causative: /kalisu/ teach /ma: disu/ make (someone) do /bareyisu/ make (someone) write

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 feet 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.

TABLE - Shows the presence of Verbs in typical children and children with intellectual disability with statistical evidence.

		TYPICAL		CHILDREN		TESTING	P	SIGNIICANC	
		CHILDREN		WITH		PROPORTIO	VALU	E AT(0.005	
				INTELLECTU		N Z VALUE	Е	LEVEL)	
				AL					
				DISABILITY					
	N	No.	%	No.	%				
		present		present					
Transitive	30	2	7	1	3	.59	.277	NS	

Intransitive	30	7	23	3	10	1.39	.083	NS
Causative	30	22	73	9	30	3.36	.000	HS

NS-No Significance, HS-Highly Significant

As seen from table, only Causative marker was used by TD (73%) and 30% by CWID. Transitive and Intransitive was not used by either group to much extent. Sreedevi (1976) reported that transitive and intransitive forms were acquired by 2.11 yrs in typical children speaking in Kannada. Statistical comparison showed high significant difference for transitive and intransitive and no significance for causative verb form. Prema (1979) has shown that causative suffix was used by 5 to 6 yr. children who spoke Kannada. Vijayalakshmi (1981) says transitive and intransitive sentences were used by 2 to 2.6 yr. old children whereas causative was used by 4 to 5 yr. old children. Uma (1991) reported the usage of all the verb types in 4-6 yrs typical children. Subbarao (1995) says that transitive and intransitive verbs were used equally by both groups of children whereas causative verb form was less frequently used by either group of children which contradicts the present result.

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 viewpoint suggests that both maturation and behavior of society simultaneously influence and determine linguistics and communicative behavior.

Considering this approach, studying children for describing their linguistic communication in naturally occurring day to day interactions becomes important. One study (Subbarao, 1995) incorporated language sampling in free interactions and presented detailed syntactic analysis. The present study incorporated methodological improvements and added language aspects making a comprehensive analysis of the language of Kannada speaking typical children and children with intellectual disability. 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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Professor and Principal, Dr. MV **Shetty College of Speech and Hearing** Mangaluru, Karnataka 575013 sat8378@yahoo.com



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