Plural Markers, PNG Markers and Case Markers in Malayalam Speaking Children with Intellectual Disability

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Abstract

Within the field of speech language pathology several attempts at studying language disorders are seen in the past 3 decades. Studies have shown that more than 80% of children with intellectual disability (ID) show language delays and requires professional intervention (Subba Rao and Srinivas, 1989; Bharat Raj, 1987; Prabhu, 1968 and others, as cited in Selvi, K., 1999). CWID showed delayed development of syntax. The LARSP procedure has been adapted successfully to describe the language of CWID in Kannada (Kumaraswamy, 2021; Subbarao, 1995). The present study followed a similar methodology and described language (in terms of syntax skills) of Malayalam speaking CWID. The objectives of the study were analyzing their expression data on plural markers, PNGF markers and Case markers. The description of Malayalam spoken syntactic structures was obtained from two sources, namely Grammar of Malayalam (Nair, 2012) and Malayalam - Descriptive Grammars (Asher, & Kumari, 1997). 60 CWID (4-6 years MA) were studied using natural conversational samples using toys, play materials, pictures. Except regular plural markers, other plural markers (e.g., Suffix/-ar and /-mar//) were not well developed in either group of CWID.

Except for second person markers other PNG markers like first person, second person and third person singular were seen frequently in both groups of children. First person and third person markers predominate in the samples probably due to the nature of data collection using spontaneous play and conversation. Case markers were generally difficult for CWID. However, nominative and genitive case markers were observed frequently in both groups of CWID.

Children with Intellectual Disability (CWID) are a heterogeneous group having non symbolic or symbolic communication disabilities. They may demonstrate spoken and written language disorders across the components of language previously described. (APA, 2013, cited in ASHA n.d). Unlike Typically Developing (TD) children, the development of language does not occur as expected in CWID. It is generally accepted that in CWID speech and language development is delayed when compared to TD children. This delay hypothesis suggests that developmental sequence of speech and language is similar and the factors underlying are similar. It is observed that CWID children have lower ceiling of speech and language as compared to TD children. Studies have pointed out that more than 80% of CWID show language delays and require professional intervention (Bharat Raj, 1987; Prabhu, 1968; Subbarao & Srinivas, 1989). Some studies (Subbarao,1995; Kumaraswamy, 2021) also emphasized deviance in the language development. Subbarao (1995) has confirmed delay hypothesis, and also reported certain syntactic deviance as compared to TD children.

Among the five domains of language, syntax is considered as the central component. The term syntax is from the Ancient Greek - syntaxis a verbal noun which literally means arrangement or setting out together (Valin, 2001). It refers to the branch of grammar dealing with the ways in which words with or without appropriate inflections are arranged to show connections of meaning within the sentence. It specifies the order the words must take and the organization of different sentence types. It allows the individual to combine words into phrases and sentences and also to transform a type of sentence into other types. Syntax describes how sentences are constructed selecting from a variety of possible arrangements of elements in sentences. The parameters of syntax include i. morphophonemic-structures, ii. plurals, iii. Tenses, iv. PNG markers, v. case markers, vi. transitives, intransitives and causatives, vii. sentence types, viii

conjunctions comparatives and Quotatives, ix. Conditional clauses and x. participle constructions.

The present study attempts to obtain parameters of syntax namely Plural markers, Case markers, PNG markers from language samples in Malayalam speaking children with ID . Broad based, naturalistic samples, descriptive linguistic analyses are important aspects and should be considered in Indian contexts. Language Assessment, Remediation and Screening Procedure [LARSP] (Crystal et al, 1976 and 1989) is one such procedure, which has proved to be clearer in its methodology and has clearer guidelines on using spontaneous language samples. It was developed as a single procedure integrating the clinical operations of screening, assessment, and remediation in the area of grammar. It is based on a description of English grammar. The present study followed the guidelines and modifications provided by Subbarao (1995) who completed a comprehensive language analysis of Kannada speaking CWID, using the overall theoretical guidelines provided by LARSP(Crystal et al., 1976 and 1989).

Aims of the Study

The present study focused primarily on obtaining selected syntactic structures from spontaneous language samples of CWID following the previous research of Subbarao (1995) and using an adapted from LARSP(Crystal et al., 1976 and 1989) in Malayalam speaking with CWID in the MA ranges of 4 - 5 and 5 - 6 years with the objectives of:

Analyzing their expression data on :

1. Plural Markers
2. Case Markers
3. PNG Markers

Participants in the Study With Inclusive and Exclusive Criteria

Participants included 60 CWID in the age range of 4-6 years Mental age, subdivided as group I (4-5 years MA) and group II (5-6 years MA) who were attending

special schools in Kerala. Their mental age details were obtained from their school records.

Inclusion Criteria

1. Children who were attending special school for at least 3-4 years were taken for the study.

2. Native Malayalam speakers were taken.

3. Children with mild to moderate intellectual disability as per the school records.

Exclusion Criteria

1) Children with any neurological, physical or sensory handicap were excluded from the study.

2) Children with severe intellectual disability were excluded from the study

Stimuli Used

Selected transitives, intransitives, causatives, and sentence types were taken from Malayalam – descriptive grammar (Asher & Kumari; 2013), *Grammar of Malayalam* (Nair 2012)

Data Collection and Analysis

The focus of this study was an analysis of their syntax structures namely Plural markers, Case markers, PNG markers. The general guidelines provided by the LARSP (Crystal et al., 1976 and 1989) was used for transcription of the sample and analysis of the response patterns. Modifications and adaptations of these guidelines followed those of Subbarao (1995) who studied Kannada speaking children. Children interacted during play for about 25 to 30 minutes. Toys and play materials, common objects, topic of conversation and list of pictures were used to elicit the responses. The presence of parameter was marked as 1 and the absence /inappropriate usage was marked as 0. The entire session was audio /video recorded using a Hewlett-Packard (HP) tablet, model - 7 voice tab.

1. Plural Markers

CWID

Table 1 shows the performance of children in Group I (MA 4-5 years) and Group II (MA 5-6 years). Both groups show a similar performance. Suffix /kal/ and numerical suffix were used by 70% or above children. Suffix /ar/ was not used by any child in both groups. No statistically significant difference was noted.

Table 1

Plural Markers in CWID with statistical evidence.

Plurals	**Group I CWID 4-5 years MA**	**n = 30 %**	**Group II CWID 5-6 years MA**	**n = 30 %**	**Z value**	**P**	**Significance**
Suffix /–kal/	21	70.0%	27	90.0%	1.94	.058	NS
Suffix/ –mar/	12	40.0%	18	60.0%	1.55	.127	NS
Suffix /–ar/	0	.0%	0	.0%	-	-	NS
Numeral suffix	22	73.3%	26	86.7%	1.29	.202	NS

HS- Highly significant, S – Significant, NS-No significance

The present study's results align well with previous studies in Malayalam speaking children. Radhika and Kumaraswamy (2010) reported that the frequency of occurrence of all plural markers was found to be less in CWID compared to TD children in the age range 4-6 years. Kaur (2019) showed that by 4 years of MA Hindi speaking CWID used neutral plurals and masculine plural /a/, with other types being acquired by a MA of 6 years. Subbarao (1995) reported that in Kannada speaking children, regular plural marker /galu/ and unmarked were seen by a MA of 4 years. Group II (5-6 years MA) showed improved performance compared to the 4-5 years MA group**.**

2. PNG Markers

CWID

Table 2 presents the number and percentages of CWID producing PNG markers. In the lower MA Group, I, all children used singular forms of first, second and third persons for both male and female forms. The difficult PNG markers were first person plural (76.6%), second person plural (40%) and third person plural (50%). Third person plural neutral was not used. In all these markers, higher MA (5-6 years) Group II children performed statistically better. The results in general suggest that by 5-6 years MA, the PNG marker system is established in CWID.

Table 2

PNG Markers in CWID with statistical evidence.

PNG	Group I CWID 4-5 years MA	n= 30 %	Group II CWID 5-6 years MA	n= 30 %	Z Value	P	Significance
I person singular/-ñaan/	30	100%	30	100%	-	-	NS
I person plural /-ñaŋŋal/ naam/ nammaḷ/	23	76.6%	30	100%	2.82	0.007	HS
II person singular /- nii/	30	100%	30	100%	-	-	NS
II person plural /- niŋŋal/	12	40 %	26	86.6%	3.75	0.000	HS
III person singular male /-avan/ivan/	30	100%	30	100%	-	-	NS
III person singular female /-avaḷ, ivaḷ/	30	100%	30	100%	1.01	0.317	NS
III person singular neutral /-atu/itu/	30	100%	30	100%	-	-	NS

III person plural /-avaṛ/ivaṛ/	15	50%	25	83.3%	2.74	0.008	HS
III person plural neutral /-ava/iva/	0	0	17	56.6%	4.87	0.000	HS

HS- Highly significant, S – Significant, NS-No significance

The results are in general agreement with the Malayalam study by Priyanka and Kumaraswamy (2018), the Kannada study (Subbarao,1995; Kumaraswamy, 2021) and the Hindi study (Kaur, 2019). Language specific issues like honorific markers and III-person plural markers were similar in Kannada and wishful markers /-na/ were difficult for CWID.

3. Case Markers

CWID

On examination of Table 3, it can be observed that uneven performance is seen in both Group I (MA 4-5 years) and Group II (MA 5-6 years), in the usage of case markers. No case marker was used by all children of either Group. Nominative, dative, locative and genitive case markers were used by more than 60% of children in Group I. Group II children used the same markers in a higher percentage of children. The pattern in both groups is similar. The differences were not statistically significant. Mohan and Kumaraswamy (2015) studied the acquisition of case markers in Malayalam speaking children with Downs Syndrome (DS) having an MA range of 3-8 years and reported that there is a general increase in the acquisition as well as frequency of usage of some type of case markers with increase in the MA of the children. The findings support the present study. Similar results are reported in Kannada speaking children (Subbarao, 1995). Hindi speaking children showed case markers usage in their samples after 5-6 years MA. Language specific differences appear to be important (Kaur, 2019).

Table 3

Case Markers in CWID with statistical evidence.

Case markers	Group I CWID 4-5 year MA	n= 30 %	Group II CWID 5-6 years MA	n = 30 %	Z Value	P	Significance
Nominative	22	73.3%	25	83.3%	.94	.351	NS
Accusative /-e/	16	53.3%	21	70.0%	1.33	.189	NS
Dative /–ku, nu/	21	70.0%	23	76.7%	.58	.562	NS
Sociative /–oṭu/	12	40.0%	19	63.3%	1.81	.076	NS
Instrumental /-aal/	11	36.7%	16	53.3%	1.30	.200	NS
Locative / -il/	20	66.7%	23	76.7%	.86	.394	NS
Genitive –/uṭe, nṟe/	20	66.7%	25	83.3%	1.49	.141	NS

HS- Highly significant, S – Significant, NS-No significance

Results and Discussion

Plural markers /-kal/, /-mar/ and numeral suffixes were frequently observed in both groups. It is observed that plural markers /-ar/ are not well developed in both groups. This observation confirms a previous study in Malayalam (Radhika & Kumaraswamy, 2010). The consistency of these observations was also noticed in Kannada speaking children (Subbarao, 1995; Kumaraswamy, 2021). Hindi speaking children of similar age groups have shown a wider and frequent use of plural markers (Kaur, 2019). Some similarity of plural development is observed in Dravidian languages.

A wide variety of PNG marker usage is observed in CWID. Lower MA group used first person, second person and third person singular markers. As expected, second person plural (/-niŋŋal/) was difficult for a majority of the children, whereas in the higher MA group almost all children showed the usage of PNG markers; a similar observation was noted for third person plural marker. The Malayalam PNG system appears to be well developed in CWID by 5-6 years MA. Studies in Kannada (Subbarao, 1995; Kumaraswamy, 2021) and Hindi (Kaur, 2019) showed a much less developed PNG system. It is possible that school training emphasizes first person

markers. Lack of spontaneous responses and communication imitations could also affect PNG use. A previous study by Priyanka and Kumaraswamy (2017) in Malayalam also confirms the observations of the present study.

Case markers were found to be less developed in CWID even in the higher MA group. Nominative and genitive case markers were observed frequently. Kannada speaking children with a MA of 4-6 years used accusative case markers frequently (Subbarao, 1995). It was interesting to note that higher MA (5-6 years) children did not show any significant difference in case marker usage. A study by Mohan and Kumaraswamy (2015) showed that Malayalam speaking CWID reported similar results. The Hindi speaking CWID, however, showed a well-developed case system (Kaur, 2019). Languages appear to present different levels of difficulty to CWID in using the case system.

Conclusions

Except regular plural markers, other plural markers (e.g., Suffix/-ar and /-mar//) were not well developed in either group of CWID. Except for second person markers other PNG markers like first person, second person and third person singular were seen frequently in both groups of children. First person and third person markers predominate in the samples probably due to the nature of data collection using spontaneous play and conversation. Case markers were generally difficult for CWID. However, nominative, and genitive case markers were observed frequently in both groups of CWID.

Limitations of the Present Study

1. Limited sample size

2. The participants were taken from a similar community. i.e., from a single dialectal population in Kerala.

Future Implications

1. To include larger number of participants

2. To include various dialectical community in Kerala

3. Detailed research work is needed in other disordered populations.

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