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Pragmatic Profiling in Malayalam speaking children with ID

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ABSTRACT

Language is a complex system of arbitrary symbols which is used for human communication. (American Speech and Hearing Association (ASHA), 1982). Pragmatics is the study of relationship between language and content. It includes particularly conversational exchanges, where two or more participants take turns to construct a text (Tear, 1985). Profiling pragmatics in Intellectual Disability is crucial because it evaluates how a person actually uses language in real world social contexts rather than just measuring their vocabulary or grammar. The study aims at profiling pragmatic language in Malayalam speaking children with ID. 15 children with Intellectual disability within the age range of 8-13 years (mental age: 4-5) and 15 Typical children of age range (4-5 yrs) participated in the study. Tasks given were general conversation, picture description and question answering. The results of the present study revealed that Typical children performed better than children with ID. The results emphasize the urgent need for targeted, context-based social communication interventions to better support this population in real-world interactions.

Key words: Pragmatic profiling, Intellectual disability, Typical children.

INTRODUCTION

Language is a structured system of communication using symbols, sounds and rules to convey meaning encompassing phonology, morphology, syntax, semantics and pragmatics. However, language is more than just words and sentences. It also includes various forms of expression that we often use unconsciously. Native speakers of a language naturally understand many of these expressions and the rules that govern them. One important area that examines these rules is pragmatics.

Pragmatics is quoted as the ability to apply language resources to facilitate effective social interaction considering the needs of the conversational partner and demands of the physical context (Stephens & Matthews, 2014). It defines as involving the understanding and using of language for different purposes such as to comment, direct, reject, protest, greet, inform, demand, state, promise, request etc. It includes adapting language to listeners situations and conversation rules like turn taking and topic maintenance. This includes starting a conversation appropriately with a question or statement introducing and maintaining topics taking turns while speaking asking for clarification when needed repairing communication breakdowns providing clarification and organizing language according to different discourse genres such as narration and expository text (Cummings, 2014; Matthews, Biney & Smith, 2018).

A linguistic profile is a systematic description of the characteristics of an individual's language use that allows the person to be identified for a particular purpose (Crystal,1982). Pragmatic profiling involves the systematic evaluation of pragmatic abilities through methods like conversational analysis, play based tasks or checklists to chart strengths and weaknesses in social communication. It assesses key skills such as turn taking, sustaining topics and tailoring language to listeners or contexts that underpin successful interactions.

Pragmatic profiling can be conducted across the lifespan for individuals who exhibit difficulties with social communication skills. This includes children with delayed language development or social communication challenges as well as school aged children who have trouble with peer interactions, maintaining topics or taking conversational turns. It is also relevant for individuals

with Autism Spectrum Disorder, Attention Deficit/Hyperactivity Disorder and Social (Pragmatic) Communication Disorder. Additionally pragmatic profiling may be appropriate for people with intellectual or developmental disabilities, hearing impairments, traumatic brain injury, right hemisphere damage and adolescents or adults who experience difficulties with social or workplace communication. As a core tool in speech language pathology aids diagnosis and therapy planning especially for social communication challenges in Intellectual disability (ID) and similar conditions by outlining pragmatic profiles to customize interventions and enhance adaptive skills and inclusion.

Pragmatic profiling plays a significant role in children with ID and it evaluates how appropriately they use language in social and daily communication contexts. People with ID often experience challenges in starting conversations, sustaining topics, following turn taking rules, interpreting social cues, seeking clarification and modifying their language according to the listener or situation. Evaluating pragmatic abilities helps identify communication difficulties that may not be detected through formal language assessments alone. Further more pragmatic profiling supports Speech Language Pathologists (SLP)s and educators in developing individualized intervention strategies aimed at enhancing social communication, functional language use and participation in educational and community environments. It also helps in tracking communication progress over time and contributes to improved interpersonal relationships, independence and overall quality of life.

Elliot, Pring and Bunning (2002) evaluated pragmatic skills in children with mild to severe ID suggested that pragmatic deficits often become more evident during their final school years, a period marked by preparation for post-school transitions.

Flusberg and Joseph (2003) analyzed the pragmatic language assessment in developmental disorders highlighted the limitations of standardized tests and advocated for naturalistic observation and discourse analysis provides a strong theoretical foundation for pragmatic profiling in children with ID.

Grossman and Flusberg (2012) demonstrated children with ID exhibit distinct pragmatic language patterns depending on subgroup characteristics, particularly the presence of autism and findings

underscore the importance of subgroup analysis and detailed pragmatic profiling to capture qualitative differences in social communication that are not explained by intellectual level alone.

Silc, Schmidt and Kosir (2017) assessed pragmatic abilities of children with mild ID revealed that no gender differences across vocabulary, grammar or story structure with only slight deviations observed in the younger group of children with mild ID when compared to TD children.

Kapalkova and Monika (2018) examined receptive language skills in Slovak speaking children with ID showed that language development is a resilient process that remains consistent despite delays associated with intellectual disabilities.

Hernández, Quinto, Martín, and Adam (2025) found that current assessment tools vary widely in the aspects of pragmatics they measure and are often not well suited to the specific communication profiles of people with ID.

Shilpashri (2010) evaluated pragmatic skills of children with ASD found that the percentage of responses from children with ASD to caregiver initiated or self initiated pragmatic skills did not follow a consistent or linear pattern across different ages when compared to TD children

Xavier, Santhana, Sunny and Kumaraswamy (2015) assessed Malayalam speaking children with Down's syndrome found out distinction between clinician initiated and self initiated pragmatic skills across different mental ages.

Gupta, Abraham and Kumaraswamy (2019) analyzed pragmatic skills in Malayalam speaking children with ID and TD children indicated that children with ID performed poorer than TD children.

Abhilash, Rakshitha and Kumaraswamy (2022) examined pragmatic language abilities in TD Kannada speaking children and children with ID indicated that children with ID demonstrated significant difficulties in various aspects of pragmatic language compared to TD children.

Swetha and Gupta (2023) assessed pragmatic skills of tamil speaking children with ID showed that tamil speaking children with ID within mental age range performed poorer compared to TD children matched for mental age.

Saranya and Kumar (2025) evaluated pragmatic skills of Gujarati speaking children with ID emphasized evaluating pragmatic profiles based on caregiver-child interactions provides a much more accurate reflection of functional communication in Indian households than traditional, rigid clinical testing.

Rasheeka, Karuppali, Bhat, Mohan and Varghese (2026) investigated how pragmatic language skills are assessed in preschool children revealed considerable variability in assessment practices.

NEED OF THE STUDY

Language assessments target vocabulary and grammar. Children with ID often exhibit disproportionate pragmatic difficulties even when structural language appears adequate. Pragmatic profiling also supports better academic participation, peer relationships and community integration by addressing social communication challenges. Additionally, it helps teachers, SLP's and caregivers understand the individual's communication style, set realistic goals and monitor progress effectively. Overall pragmatic profiling promotes improved social competence, independence and quality of life in individuals with ID.

METHODOLOGY

Aim of the study

The study aims at profiling pragmatic language in Malayalam speaking children with ID.

Subjects

15 children with Intellectual disability in the chronological age range of 8-13 years (mental age: 4-5) and 15 Typical children of age range (4-5 yrs).

Inclusion Criteria

- Subjects must meet the DSM 5 criteria for ID.

- Malayalam as native language.
- Children with Intellectual disability with mild to moderate severity.

Exclusion Criteria

- Children with severe Intellectual Disability.
- Children with any physical or sensory handicap.
- No history of any Speech, Language, cognition and neuropathology in normal population.

Procedure

An interactive session between the clinician and the child was video recorded for 15-20 minutes in a comparatively quiet and well illuminated room. To aid the interaction between the clinician and the child, the materials like toys, picture cards and chocolates were used.

The following pragmatic parameters were evaluated:

1. Response for eye contact
2. Smiling
3. Response for gaze exchange
4. Response for requesting object and/or action
5. Response for labeling
6. Answering questions
7. Response for turn-taking
8. Response for conversational repair
9. Response for topic initiation
10. Response for topic maintenance
11. Response for comment/feedback
12. Response for adding information

Each appropriate response was scored as '1' and absence of response was scored as '0'.

Statistical Analysis

Obtained scores were statistically analyzed using SPSS (version 27).

RESULTS AND DISCUSSION

The aim of the study was to profile pragmatics in children with ID. The obtained data was analyzed and results are discussed below.

Table 1

Shows the comparison of TD children and children with ID on General conversation.

	Group	Yes		Comparison between the groups	
		Count	Percentage	p-value	Significance
RESPONSE FOR EYE CONTACT	Children with Intellectual Disability	11	73.33%	0.032*	S
	Typically Developing Children	15	100.00%		
SMILING	Children with Intellectual Disability	8	53.33%	0.003*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR GAZE EXCHANGE	Children with Intellectual Disability	9	60.00%	0.031*	S
	Typically Developing Children	14	93.33%		
RESPONSE FOR JOINT ATTENTION	Children with Intellectual Disability	3	20.00%	<0.001*	S

	Typically Developing Children	15	100.00%		
RESPONSE FOR REQUEST OF OBJECT AND/OR ACTION	Children with Intellectual Disability	4	26.67%	<0.001*	S
	Typically Developing Children	13	86.67%		
RESPONSE FOR LABELING	Children with Intellectual Disability	7	46.67%	0.005*	S
	Typically Developing Children	14	93.33%		
ANSWERING QUESTIONS	Children with Intellectual Disability	10	66.67%	0.068	NS
	Typically Developing Children	14	93.33%		
RESPONSE FOR NEGATION	Children with Intellectual Disability	4	26.67%	<0.001*	S
	Typically Developing Children	14	93.33%		
RESPONSE FOR TURN TAKING	Children with Intellectual Disability	3	20.00%	<0.001*	S
	Typically Developing Children	14	93.33%		
RESPONSE FOR CONVERSATIONAL REPAIR	Children with Intellectual Disability	1	6.67%	<0.001*	S
	Typically Developing Children	12	80.00%		
RESPONSE FOR TOPIC INITIATION	Children with Intellectual Disability	1	6.67%	<0.001*	S
	Typically Developing Children	11	73.33%		

RESPONSE FOR MAINTANCE	Children with Intellectual Disability	6	40.00%	<0.001*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR COMMENT/FFEDBACK	Children with Intellectual Disability	0	0.00%	<0.001*	S
	Typically Developing Children	13	86.67%		
RESPONSE FOR ADDING INFORMATION	Children with Intellectual Disability	0	0.00%	<0.001*	S
	Typically Developing Children	11	73.33%		

S-Significance, NS-No Significance

Table 1 shows that children with ID performed better on eye contact (73.33%), gaze exchange (60.00%) and performed poorer on providing comments/feedback, adding information (0.00%), and for topic initiation, conversational repair (6.67%). Answering questions showed no statistically significant difference between the two groups (p = 0.068), where 66.67% of children with ID responded successfully compared to 93.33% of TD children.

Table 2

Shows the comparison of TD children and children with ID on Picture description.

	Group	Yes		Comparison between the groups	
		Count	Percentage	p-value	Significance
RESPONSE FOR EYE CONTACT	Children with Intellectual Disability	11	0.733	0.032*	S
	Typically Developing Children	15	1.000		
SMILING	Children with Intellectual Disability	8	0.533	0.003*	S

	Typically Developing Children	15	1.000		
RESPONSE FOR GAZE EXCHANGE	Children with Intellectual Disability	11	0.733	0.142	NS
	Typically Developing Children	14	0.933		
RESPONSE FOR JOINT ATTENTION	Children with Intellectual Disability	8	0.533	0.003*	S
	Typically Developing Children	15	1.000		
RESPONSE FOR REQUEST OF OBJECT AND/OR ACTION	Children with Intellectual Disability	8	0.533	0.003*	S
	Typically Developing Children	15	1.000		
RESPONSE FOR LABELING	Children with Intellectual Disability	11	0.733	<0.001*	S
	Typically Developing Children	15	1.000		
ANSWERING QUESTIONS	Children with Intellectual Disability	11	0.733	<0.001*	S
	Typically Developing Children	15	1.000		
RESPONSE FOR NEGATION	Children with Intellectual Disability	5	0.333	<0.001*	S
	Typically Developing Children	15	1.000		
RESPONSE FOR TURN TAKING	Children with Intellectual Disability	3	0.200	<0.001*	S
	Typically Developing Children	13	0.867		

RESPONSE FOR CONVERSATIONAL REPAIR	Children with Intellectual Disability	0	0.000	<0.001*	S
	Typically Developing Children	11	0.733		
RESPONSE FOR TOPIC INITIATION	Children with Intellectual Disability	1	0.067	<0.001*	S
	Typically Developing Children	13	0.867		
RESPONSE FOR MAINTANCE	Children with Intellectual Disability	7	0.467	<0.001*	S
	Typically Developing Children	15	1.000		
RESPONSE FOR COMMENT/FFEDBACK	Children with Intellectual Disability	0	0.000	<0.001*	S
	Typically Developing Children	14	0.933		
RESPONSE FOR ADDING INFORMATION	Children with Intellectual Disability	1	0.067	<0.001*	S
	Typically Developing Children	11	0.733		

Table 2 shows that children with ID performed better on eye contact, gaze exchange, labeling and answering questions (73.33%). Gaze exchange showed no statistically significant difference between the two groups (p = 0.142). Children with ID performed poorer on conversational repair, comments/feedback(0.00%) and for topic initiation and adding information (6.67%).

Table 3

Shows the comparison of TD children and children with ID on Question answering.

	Group	Yes	Comparison between the groups

		Count	Percentage	p-value	Significance
RESPONSE FOR EYE CONTACT	Children with Intellectual Disability	12	80.00%	0.068	NS
	Typically Developing Children	15	100.00%		
SMILING	Children with Intellectual Disability	8	53.33%	0.003*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR GAZE EXCHANGE	Children with Intellectual Disability	9	60.00%	0.099	NS
	Typically Developing Children	13	86.67%		
RESPONSE FOR JOINT ATTENTION	Children with Intellectual Disability	6	40.00%	<0.001*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR REQUEST OF OBJECT AND/OR ACTION	Children with Intellectual Disability	6	40.00%	<0.001*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR LABELING	Children with Intellectual Disability	9	60.00%	0.006*	S
	Typically Developing Children	15	100.00%		
ANSWERING QUESTIONS	Children with Intellectual Disability	11	73.33%	0.032*	S

	Typically Developing Children	15	100.00%		
RESPONSE FOR NEGATION	Children with Intellectual Disability	5	33.33%	<0.001*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR TURN TAKING	Children with Intellectual Disability	2	13.33%	0.003*	S
	Typically Developing Children	10	66.67%		
RESPONSE FOR CONVERSATIONAL REPAIR	Children with Intellectual Disability	0	0.00%	<0.001*	S
	Typically Developing Children	9	60.00%		
RESPONSE FOR TOPIC INITIATION	Children with Intellectual Disability	0	0.00%	<0.001*	S
	Typically Developing Children	10	66.67%		
RESPONSE FOR MAINTANCE	Children with Intellectual Disability	6	40.00%	<0.001*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR COMMENT/FFEDBACK	Children with Intellectual Disability	0	0.00%	<0.001*	S
	Typically Developing Children	15	100.00%		
RESPONSE FOR ADDING INFORMATION	Children with Intellectual Disability	0	0.00%	<0.001*	S
	Typically Developing Children	10	66.67%		

Table 3 shows children with ID performed better on eye contact (80.00%), answering questions (73.33%), gaze exchange and labeling (60.00%). Eye contact and gaze exchange showed no statistically significant differences between the groups. Children with ID performed poorer on conversational repair, topic initiation, comments/feedback, and adding information (0.00%). whereas TD children maintained substantial success rates ranging from 60.00% to 100.00% in those parameters.

Table 4

Shows the comparison of performance of two groups across different tasks.

Tasks	Group							
	Children with Intellectual Disability				Typically developing children			
	Mean	Median	Standard Deviation	Interquartile Range	Mean	Median	Standard Deviation	Interquartile Range
General Conversation	4.47	4	1.922	3	12.67	13	1.047	2
Picture Description	5.67	5	2.193	4	13.07	13	0.884	1
Question Answering	4.93	5	1.58	2	12.47	12	0.915	1

Table 4 shows TD children obtained higher mean scores in picture description (13.07), general conversation (12.67) and question answering (12.47) compared to children with ID, whose mean scores were 5.67, 4.47 and 4.93 respectively.

Table 5

Shows the p values and significance across the tasks.

	General Conversation	Picture Description	Question Answering
Test statistic	-4.695	-4.723	-4.713
p-value	<0.001	<0.001	<0.001
Significance	S	S	S

Table 5 shows that there is statistically significant difference in the pragmatic parameters between TD children and children with ID for all the three tasks general conversation, picture description and question answering.

DISCUSSION

Children with ID performed better for eye contact and gaze exchange because these are pre linguistic, early developing social behaviors that require very low cognitive load. Answering questions showed better performance because it is a highly structured reactive task that is heavily practiced in daily routines and therapies. Conversational tasks like topic initiation, feedback and repair showed poorer performance because they demand advanced executive functioning, working memory and Theory of Mind. Because these abstract tasks require children to create their own language, consider the listener's perspective and handle unpredictable social situations on the spot, they can easily overload the cognitive and language skills of children with ID. Typical children obtained significantly higher mean scores across all three pragmatic tasks because picture description, general conversation, and question answering require a dynamic combination of advanced language formulation, working memory and executive functioning. In general conversation and picture description, a child must independently organize their thoughts, retrieve vocabulary and build structured sentences to describe abstract or fluid contexts. While question answering is more structured doing it successfully at a high level still demands rapid auditory processing and comprehension.

SUMMARY AND CONCLUSION

Language is a learned code or system of rules. It involves five components namely; phonology, morphology, syntax, semantics and pragmatics (Shilpashri, 2010).The study aimed to profiling pragmatic language in Malayalam speaking children with ID (mental age 4-6 years).The results of

the present study revealed that TD children performed better than children with ID. TD children possess the cognitive maturity to navigate these heavy linguistic demands smoothly whereas children with ID struggle with the abstract reasoning, processing speed and mental planning required leading to a statistically significant gap in performance across all three parameters. The widespread, statistically significant differences across almost every communicative measure emphasize that the main barrier for children with ID is not their desire to interact, but the immense cognitive and language demands placed upon them. Complex interaction requires heavy use of executive functioning, processing speed, working memory, and Theory of Mind. These specific cognitive faculties are fundamentally limited by intellectual disability.

Limitations Of The Study

- Lesser sample size
- Age range of 4-5 years were taken for the study.
- Limited parameters of pragmatic skills were selected.

Future Directions

- Study can be done in different age groups of ID and TD children.
- Study can be conducted on other dialects in Malayalam.
- Detailed research work can be conducted in other disordered population.

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