

Development of a Checklist for the Assessment of Pragmatic Language Impairment

Safa Pervaiz¹, Muhammad Sikander Ghayas Khan², Saba Aziz³

ABSTRACT:

Introduction: Pragmatic Language Impairment is a language disorder characterized by unimpaired structural aspects but marked deficits in the use of language.

Objective: The objective of the study was to develop a checklist for the assessment of Pragmatic Language Impairment (PLI).

Material and Methods: This study was carried on, in a time period of 3 months. A sample of 27 patients was studied with an age range of 5–16 years. Data was collected from the outpatient department of The Children's Hospital, Mayo Hospital and Sheikh Zaid Hospital Lahore. The frequency of non-verbal, verbal and social communication behavior was calculated by using SPSS (Statistical Package for the Social Sciences).

Results: The Checklist was applied on 27 individuals. Results found that children with PLI show deficit in all three categories, with marked deficit shown by 15 children (58%) in understanding conversational cues and 10 children (37 %) in understanding change in tone of voice. In the category of verbal communication 18 (66%) children used inappropriate initiation, lack of coherence 19 (67%), insufficient information 16 (59%), lack of context based conversation 22 (81%), problem in understanding figurative language 26 (96%) and absence of presupposition was in 24 (88%) of these children. In social communication section of the checklist 23 out of 27 (85%) exhibited deficit in expressing feelings and 24 (88%) children never used or understood humor.

Conclusion: The checklist identified symptoms of pragmatic language impairment and can be used to screen children with PLI.

Keywords: Speech therapy, Assessment, Pragmatic Language Impairment, Autism

INTRODUCTION:

The pragmatic language impairment previously called semantic pragmatic disorder was first introduced by Rapin and Allen in 1983 as a language disorder characterized by fluent and syntactically complex expressive language but marked deficit in understanding discourse and in appropriate use of language(1, 2)This disorder specifically affects the language areas of content and use despite the presence of average to superior levels of form(grammar, speech). Pragmatic language impairment in a severe form considerably overlaps autism spectrum disorder with initially delayed language development which is later accompanied by jargon, echolalia and auditory inattention. When these children get older they have superficially complex language with usually clear articulation but have difficulty in comprehension of language demonstrated as literal interpretations and by using language inappropriately in conversation. (1, 3)In addition, children with pragmatic

¹ Hamza Foundation Academy, Johar Town, Lahore (binte_pervaiz@hotmail.com)

² Riphah Collage of Rehabilitation science, Riphah International University Lahore Campus

³ The School of Allied Health Sciences, Children's Hospital & Institute of Child Health, Lahore

language impairment who do not have autism have also been described a number of times in the literature (4)(5). Despite of frequent researches and diagnostic use of this term, PLI was not included in DSM IV or in ICD-10, its diagnostic classification was much disputed since the term is being used, there are few researchers who take it as a language disorder and purpose that the pragmatic difficulties are considered to be a second consequence of SLI i.e. Specific Language Impairment (6, 7)and there are others who disagree with the relationship between SLI and PLI but (8, 9)somewhat PLI comes under both social and language disorders making it a social communication disorder as introduced by DSM-V. This new category is defined as an impairment of pragmatics which is diagnosed on the basis of difficulty in the social uses of verbal and nonverbal communication in naturalistic contexts that affects the development of social relationships and discourse comprehension. This impairment cannot be explained by low abilities in the domains of word structure and grammar (syntax) as well as general cognitive ability. This term is intended to give a new diagnostic home to children with significant social and communication difficulties who do not exhibit the repetitive behaviors of ASD or those previously classified with DSM-IV as PDD-NOS.(9)There are no traditional language assessment instruments available in Pakistan to measure pragmatic dysfunctions accurately. Internationally Test of Pragmatic Language (TOPL) and Children communication checklist (10)is used for the evaluation of pragmatic language. These tools are not available in Pakistan, so the children were either not diagnosed at all or were diagnosed according to the features described by Rapin and Allen i.e. difficulties in comprehension of connected discourse, verbosity, word finding deficits as evidenced by circumlocutions, semantic paraphasias and lack of semantic specificity, stereotyped conversational responses, literal interpretations, responses to one or two words, difficulty in turn taking and maintaining a topic in discourse(10)Children with deficits in semantics and pragmatics can have impairments in higher level language skills which includes following rules of social language (debating/disagreeing, conflict resolution, generating multiple solutions), conversational skills (initiation, topic maintenance, turn taking, etc.) and presupposition or perspective talking (including the thoughts, ideas or feelings of the listener into conversations). In the area of academics, children with these deficits mentioned above will struggle in tasks that require explanations of social characteristics, similarities and differences, cause and affect vs. correlation, as well as comprehension and use of idioms and figurative language. In addition, they have difficulties in problem solving including sequencing and predicting. Hence all of these areas should be keenly assessed by a speech and language pathologist to identify strengths and weaknesses in the social communication domain.

METHODS:

This observational study was conducted over a period of three months at the department of developmental pediatrics CH & ICH Lahore and the speech therapy departments of Mayo hospital and Sheikh Zaid Hospital Lahore. . A checklist which screened the symptoms of Pragmatic language impairment was used for each individual. The checklist was divided into three sections: nonverbal communication, verbal communication and social communication. Each section has a set of questions based on the features of PLI. The checklist was administered on a total number of 27 children with an age range of 5-16 years with the help of their parents. The frequency of non-verbal, verbal and social

communication behavior was calculated by using SPSS (Statistical Package for the Social Sciences)

RESULTS:

Table 4.1: Frequency of Nonverbal Communication Behaviors of Children with Semantic Pragmatic Disorder.

Non-Verbal Communication	Never	Sometimes	Consistently
Eye Contact	2	5	20
Conversational Cues	15	10	2
Physical Space	5	10	12
Tone of Voice	10	17	0
Understands Facial Expressions	4	20	3

Table 4.2: Frequency of Social communication behaviors of children with Pragmatic language impairment

Social Communication	Never	Sometimes	Consistently
Greets	3	14	10
Ask For Help	11	15	1
Ask For Permission	22	5	0
Feelings	23	3	1
Friendship	17	9	1
Humor	24	3	0
Affection	17	9	1

Table 4.3: Frequency of verbal communication behaviors of children with Pragmatic language impairment

Verbal Communication	Never	Sometimes	Consistently
Appropriate Initiation	18	9	0
Coherence	19	6	2
Repeats When Misunderstands	9	17	1
Gives Sufficient Information	16	11	0
Context	22	5	0
Ask to Repeat	13	13	1
Figurative Language	26	1	0
Relevant Answers	7	18	2
Stereotyped Conversations	1	9	17
Joins Conversations	16	10	1
Conversational Repair	23	4	0
Shifts Topic	25	2	0
Closes Topic	24	3	0
Paraphasia	16	6	5
Circumlocutions	8	13	6
Neologism	19	3	5

Narration	16	10	1
Presupposition	24	2	1

Discussion

The main purpose of the present study was to design a checklist for screening children with Pragmatic language impairment. A checklist of conversational behaviors designed to measure semantic and pragmatic aspects of language was used on the children with features of Pragmatic language impairment coming to the developmental pediatrics Department of Children Hospital and the Institute of Child Health Lahore, the speech therapy department of Sheikh Zaid Hospital and Mayo Hospital Lahore. The checklist was divided into three categories; nonverbal communication, verbal communication and social communication behaviors and each area was assessed on three scales; ‘never’ for those who do not show the response at all, ‘sometimes’ for those who were reported by their parents to have shown frequent or occasional response and ‘consistently’ for those individuals who constantly exhibited the response. Nonverbal communication included eye contact, understanding conversational cues, maintaining appropriate physical space, understanding and using appropriate tone of voice and facial expressions in the process of communication. The study results found that children with Pragmatic language impairment mostly showed consistent eye contact with poor understanding of facial expressions and tone of voice. The same was found in a comparative study conducted by Bishop *et al.*, (2000)(8) in England, children with PLI were compared with a group of children with specific language impairment (SLI) and the comparison of the results showed that PLI group was less responsive on verbal and nonverbal cues as compare to SLI group and those who struggled in nonverbal responses also had relatively higher level of inappropriate pragmatic responses. The present study results show a deficit in conversational skills with inappropriate initiations, lack of coherence, not giving sufficient information to the listener to comprehend, lack of context based conversations, difficulty initiating, shifting and closing a topic while similar results were found by previous researches conducted by Barron-Cohen, (1988) at Oxford University, England and by Tager-Flusberg, (1996) at University of Massachusetts, Boston.(11)(12) Taking turns and maintaining conversational cues were also assessed in the present study and poor performance was observed in this category similar results were found in another study by Botting (2003) at the Manchester University, United Kingdom according to the results speakers with Pragmatic language impairment appear to have difficulty taking turns appropriately when they are engaged in a conversation, topic maintenance and topic development were also found to be problematic areas.(13) Bishop (1989) theorized in his study at Manchester university that speakers with PLI may fail to develop the topic by adding new, relevant information. Instead, they may keep repeating previously mentioned topics or fail to link their words to prior ones. In addition, sudden and irrelevant topic shifts may occur. Figurative language is the use of idioms and sarcasm in normal conversations and present study results showed children with PLI have marked deficit in this area.(14) Happe, (1993) also noted frequent Difficulties with figurative language and found that children with Pragmatic language impairment have literal interpretations of language(15) Ketelaars, (2009) in his study at Netherlands also observed that Children with PLI showed higher numbers of paraphasia, nonrelated errors, and omissions and

circumlocutions and the present study also detected circumlocutions, paraphasia, and neologism in verbal communication behaviors of these children.(13)

CONCLUSION:

Although PLI is categorized as a disorder of the use of language but there seems to be a large overlap in symptoms with autism spectrum disorders. In addition, The diagnostic and statistical manual of mental disorders, fifth edition (DSM- 5) now introduced a new diagnostic term the social communication disorder for children with pragmatic language impairment and who do not have stereotyped restricted behaviors or interests. Despite of the addition of a new term there are no valid assessment tools in Pakistan. A checklist has been designed in the present study according to the features of PLI and frequencies of all symptoms were analyzed. Study results found deficit in all three categories, i.e.; Nonverbal, Verbal and social communication behaviors. As early social and language problems often have pervasive effects, early detection of these problems through screening is of critical importance and this checklist can be used to screen children with Pragmatic language impairment. Further research is required to develop formal reliable and valid assessment tools for PLI more recently called the social communication disorder.

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