LINGUISTIC PROFILE. TEST (LPT) (HINDI) - NORMATIVE DATA FOR CHILDRENIN GRADES I TO X

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CERTIFICATE

This is to certify that this Dissertation entitled: **LINGUISTIC PROFILE TEST (LPT) (HINDI) - NORMATIVE DATA FOR CHILDREN IN GRADES I TO X** is the bonafide work in part fulfilment for the Final year MSc, (Speech and Hearing) of the student with Reg.No.M9311.

Mysore
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C E R T I F I C A T E

This is to certify that this Dissertation entitled : **LINGUISTIC PROFILE TEST (LPT) (HINDI) - NORMATIVE DATA FOR CHILDREN IN GRADES I TO X** has been prepared under my supervision and guidance.

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DECLARATION

I hereby declare that this Dissertation entitled: **LINGUISTIC PROFILE TEST (LPT) (HINDI) - NORMATIVE DATA FOR CHILDREN IN GRADES I TO X** is the result of my own study under the guidance of **Dr.Pratibha Karanth,** Prof, and Head of the Department of Speech Pathology, All India Institute of Speech and Hearing, Mysore and has not been submitted earlier at any University for any other Diploma or Degree.

Mysore
May 1995

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TO

Mummy and Papa

Thank you for allthe loving things you so often do and the examples you have always set.

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CHAPTER I

INTRODUCTION

The presentation of language tests has assumed that a judgement of "language disorder" must be based on an understanding in both form and function, of what is to be expected with chronological age. The description available from an appropriate combination of tests, results the child's abilities and disabilities within his language system (Harold and Thomas, 1981).

A test is basically a tool available to the clinician for sampling some of a child's behavior in terms of the different dimensions. It is an objective measure and aids the clinician in arriving at an accurate diagnosis and in successful rehabilitation of the clients. There are different types of tests, designed with a particular purpose. There are screening tests which are used to tap the early vocal and verbal skills of small children and in older children, for the identification of the problem. Then, there are diagnostic tests which are more detailed and tells the amount of the disability and ability in any particular subability. There are those tests also which are based on the age range they are testing. Some tests are designed especially to test language and its acquisition

in preschoolers and some tests are to test language and its disorders in school-going children. Some tests are administered only for the adult population and then there are tests which are efficient in testing all the age groups.

There is a vast variety of these tests being used abroad. During the last decade or two, a plethora of language tests have been published in the west. Consequently, the speech language clinician in the west has a wide choice of language tests for different purposes in different theoretical frameworks. The Indian scene on the other hand is characterized by an extreme paucity of language tests. In the recent past some attempts have been made to fill the lacunae, for testing younger and adult population but for school going children there is still lack of good language tests. Very little attention has been paid to this school going age group.

The purpose of the study is to establish normative data on Linguistic Profile Test - Hindi (LPT, Karanth, 1984) for school going children between 6-15 years of age (ie. from grade I to grade X). These normative scores of LPT would be useful in identifying school age children with language deficits and also in finding out the area of deficit - ie.

linguistic skills and structures at different linguistic levels which is essential to carry out a systematic language remediation programme.

CHAPTER II

REVIEW OF LITERATURE

The learning of language by children has attracted a great deal of attention in the area of child development, particularly since the 1970s.

Language acquisition in children is explained differently by two approaches - Chomskyan Model and the Behaviorist Model. The model proposed by chomsky and others is that the child is born with an innate capacity for language acquisition; that the human being is in some way prestructured towards the acquisition of language, so that when the child is exposed to language, certain language structuring principles automatically begin to operate.

The Behaviorist Model explains language learning as essentially a process of imitation and reinforcement. The child learns to speak by copying the noise patterns heard around him, and through stimulus and response, trial and error, reinforcement and reward, he would refine his own production until it matches the language of his adult models (Crystal, 1976).

A number of studies in a variety of disciplines have been done in the area of language acquisition. Psychologists, linguists, educators, parents, neurologists and speech-pathologists have contributed to the knowledge of language acquisition in children. The information from developmental psycholinguistics is useful to the assessment and management of language disordered children. The vast research on language acquisition has been through case studies both longitudinal and cross-sectional (McCarthy, 1930; Day, 1932; Davis, 1937; Templin, 1957; Winitz, 1959; Spriesterbach, Darley and Morris, 1962; Miller, 1962).

Most of the work on children's language acquisition has been focussed on preschool development. The relative speed and efficiency of language lerning has been taken as a main justification for a large innate component in language development. It has been often argued that children's language acquisition is virtually completed by the time they go to school. It has become increasingly clear, however, that a great deal of acquisition takes place after 5 years, particularly in the context of formal schooling. A review of literature on language acquisition reveals that language is an ongoing process which is active during the school years also.

By the time the child enters school at 5 years the preliminary stages considered to be so important to the potential for language development will be well under way in the majority. However, it is not unusual for problems to be present or even to persist during earlyschool years. The demands that are placed on the child's language skills change at school entry. The environment is widened such that family and home are no longer the only considerations. For the child with difficulty in language development the transition to school can be a considerable hurdle. Language problems may be accompanied by problems of social interaction which can further impede progress at school.

Such language disordered childrn's problems are concentrated in language skills. All learning involves language to some extent. Thus the child's difficulty becomes more diffuse, involving abstract concepts, manipulation of vocabulary as well as poor auditory memory and attention.

A thorough assessment of school going children, that determines strengths and needs in which information is shared between parents and professionals, is thus required.

There has been a lot of work done abroad on problems of language acquisition in school going children. Durkin (1987) claims that later language development is difficult to handle within a single comprehensive theoretical framework because a succession of changes takes place in the child's later language development which are quantitatively and qualitatively less manageable than those in previous stages.

A number of studies have been done to seek the pattern of language development in school going childrn. These studies are either longitudinal studies ie. studying a subject over a long period of time or cross-sectional studies ie. studying a number of subjects over short duration of time. Then there are studies which have focussed their main attention on only one aspect of language for eg. it can be a study only on syntax or on semantics and so on. Whereas, there are those studies also which study language as a whole ie. focussing their attention to all the aspects of language, whether it be syntax, semantics or discourse. A few studies have taken a combination of some aspects of language. Consequently, based onthese studies done, a number of tests for assessing language development have been developed on the same pattern.

Studies on School Going Children:

Gregory, Shanahan, Walberg (1985) did a descriptive analysis of high school seniors with speech disabilities. Of over 26,000 high school seniors for whom survey data was collected, 278 were identified as having speech disabilities. These orally handicapped pupils tended tobe oler, more often from linguistic minority groups and were at a disadvantage regarding achievement, self image, motivation, career aspirations when compared to their peers.

Stewart (1985) studied incidence and prevalence communicative disorders in a mid southern public school system in USA in grades K through 12. Results indicate an average prevalence of 2.95% for primary communicative disorders in school population.

Stewart (1985) in another study determined number and prevalence of communicative disorderes in minority preschool and school age children in USA. Results indicate out of 3827 children seen from 1973 to 1977, 38.5% were diagnosed as with communicative disorders. Distribution of population for hearing, speech, language and learning disabilities was 4.88%, 1.63%, 0.84% and 0.33% respectively.

Distribution for preschool, elementary, junior high school was 39.2%, 38.9% and 21.9% respectively.

Hill and Hayner (1992) compared the language performance of low achieving (LA) elementary school students and normal achieving students. Results show over half of LA group scored low on language measures.

Studies on Phonology in School Going children:

Grunwell (1981) summarizes various aspects of children's phonetic and phonological development. It appears that children have acquired the basics of the phonetic system by age 5, but that mature phonological system is not completely acquired until about age 10.

Hoffman and Norris (1989) studied spelling errors of 45 elementary school children (Ist, 2nd and 3rd grade) which were analyzed for phonological process patterns. A considerable proportion involved both syllabic reduction and feature changes similar to those seen in normal spelling development.

Roberta, Burchinal and Footo (1990), examined phonological development of 145 children between ages 2 1/2

and 8 years. Speech was assessed anually using a standardized articulation test and analysed for the occurrence of both common and uncommon phonological processes. A marked decline in process usage was observed between ages 2 1/2 - 4 years and infrequent process usage was observed after the age of 4. Uncommon processes were used in frequently even at 2 1/2 years.

Lewis and Freebairn (1992) studied residual effects of preschool phonology disorders in grade school, Adolescence and Adulthood. Age ranges were 4 to 6 (preschool), 7 to 11 (grade school) 12-17 (adolescence), 18-45 (adulthood). Results show high performance on measures from preschool to grade school and smaller but steady improvement to adolescence to adulthood.

Oerlemans and Dodd (1993) studied development of spelling ability and letter sound orientation in primary school children. Modified version of Schonell Graded spelling test (1956) was administered to assess 1372 children in grades 2-6. Children with higher socio-economic status groups were better spellers. children who were good spellers tended to generate more phonologically plausible misspellings. Results show phonological

awareness is associated with acquisition of adequate spelling ability.

Studies on Syntax in School Going Children:

Fujiki, Brinton and Dunton (1987) examined the effectiveness of a grammatical judgement screening test in separating linguistically normal and language disordered first grade (6:6 - 7:6 years), 2nd grade (7:6 - 8:6 years), 3rd grade (8:6 - 9:6 years) children. Ten language disordered and ten linguistically normal children were selected from each grade, for a total of sixty. Results indicated that there were statistically significant differences between performance of normal and language disordered children at the first and second grade levelB.

Fujiki, Brinton and Dunton (1987) examined the ability of normal and language impaired children to correct grammatical violations of word order. Ten language impaired and ten linguistically normal subjects were sampled from following age levels: 6, 7, 8, 9 and 10 years with a total of 100 subjects. Results indicate normal 6-, 7-, 8 year old performed significantly better than their language impaired age matched peers. Also, performance of language impaired 9- and 10 years olds was superior to that of

younger impaired groups. In normals only age level difference were produced by 6 year old, who performed significantly poorly than two of the older age groups (8- and 10- years).

Tyler and Nagy (1989), administered 3 paper and pencil measures to students in 4th, 6th and 8th grade (total 100 children) to assess different aspects of their knowledge of English derivational suffixes. Children appear to develop a rudimentary knowledge of derivational morphology before IVth grade. Knowledge of syntactic properties of derivational suffixes appears to increase through 8th grade. Knowledge of distributional properties of suffixes also increases, with 6th grade students showing an increase in over generalization errors parallel to that found for inflectional suffixes in much younger children.

Masterson and Kamhi (1992) studied linguistic trade offs in school age children with and without language disorder. Several linguistic measures were used to represent syntactic and phonological productions in order to determine whether interrelationship patterns would vary across measures. Linguistic interactions present in imitated speech were compared to those from spontaneous

speech. Results show trade off present in imitated speech than in spontaneous speech, in both groups. Interrelationship patterns were similar across groups.

Windsor (1994) studied children's comprehension and production of derivational suffixes. Relational knowledge of 21 derivational suffixes conveying six different meanings was investigated with 120 children from 3rd to 8th grade and with 40 adults. Ten children from each grade level were taken with age ranges from 8 to 14 years. Results from nonsense word paradigm indicated that suffixes were comprehended with greater accuracy than they were produced, particularly by children. Children in 5th through 8th grades were more accurate than children in 3rd and 4th grade in both suffix comprehension and production and adults demonstrated greatest accuracy in both comprehension and production.

Studies on Semantics in School Going Children:

Durkin, Crowther and Shire (1981) deal with vocabulary in particular how children cope with polysemy. They look at children's use and understanding of certain relational terms that are acquired first in the context of spatial reference but ae then extended to describe mathematical or

musical relations eg. Lower, up etc. The evidence indicates that children acquire the basic spatial sense of the items fairly early and that it takes some years before they learn the derived and more specialized meanings.

Brinton, Fujiki and Mackey (1985) explored the ability of elementary school age children to comprehend six idiomatic expressions. Eighty linguistically normal children, twenty from each of four different grade levels (Kindergarten, IInd grade, IVth grade, VIth grade) participated in the study. Results suggest that when studied as a group, comprehension of the idioms studied improved with increasing age. However, when examined individually performance was found to be highly variable from idiom to idiom.

Clark and Berman (1987) examined the type of linguistic knowledge that affect children's ability to understand and produce novel compounds in Hebrew. Sixty children aged - 3:0 to 9;0 and 12 adults were asked to interpret and to produce noun and noun compounds. Their comprehension was in advance of their production. In comprehension, morphological form of head nouns had little effect - from age 4, children did equally well on all the compound forms

tested; they identified head nouns and passible relations between heads and their modifiers. In production though knowledge of morphological form was crucial. The fewer the changes the children had to make in forms of head nouns, the earlier they mastered that compound pattern. Finally the children who produced novel compounds correctly were also able to interpret them, but not vice-versa.

Coates (1988) tested children's understanding of modal meaning at ages of eight and twelve. The results of this test was compared with the results of the same test on adult informants. Cluster analysis of data reveals underlying patterns - 8 year old children have only rudimentary system of modal meaning and even by age of 12 year, child's system will not be isomorphic with the adult system.

Evans and Gamble (1988) examined relationship between attribute saliency and metaphor interpretation in school children. Two types of metaphors - predicate - promoting (PP) and predicate introducing (PI) were selected. Adult samples used to select metaphors of each type which then were presented to 24 chidlren in each of grades, 3, 5, 7 (mean ages 8;5, 10;6, 12;8). Older children correctly interpreted more metaphors than younger children and at each grade level no difference was observed between no.of correct

interpretations of PP and PI metaphors. Attribute saliency for the individuals perceiving metaphor plays a key role in the interpretation process.

Nippold, Schwarz and Undlin (1992) did a developmental study of adolescents and young adults concerning use and undestanding of adverbial conjuncts. Two types of adverbial conjuncts - concordant (eg. similarly, more over) and disconcordant (eg. contrastively, rather) were examined in 120 adolescents and young adults. The age groups were 12;9, 15;10; 19;2, 23;8. Results indicate increasing ability to use and understand these words in the written mode.

Studies on Narratives in School Going Children

Liles (1985) studied children's use of cohesion of spoken narratives which was compared across three groups; normal, language disordered with good story comprehension and language disordered with poor story comprehension. Subject's age ranged from 7:6 to 10:6. Results indicate that good comprehending language disordered children and normal children used similar linguistic cohesive structures, but both groups differed from poor comprehending language

disordered children. Both groups of language disordered chidlren used less adequate cohesion than normal children.

McCabe and Peterson 91985) analysed naturalistic production of 'because' and 'so' by 96 chudlren, aged 3;6 to 9;6 while narrating real, personal events. Results indicate that semantic errors could be construed as evidence of confused thinking. Of semantically correct causal uses, 81% encode psychological causality, mostly statements of other peoples intentions. Virtually all causality occured prior to the time of narration. Age trends were remarkably absent. "Because* and 'so' are used in significantly different ways even by the youngest children.

Scott (1988), evaluated school children's narratives. Two normally developing chidlren and two language disordered children were taken in the age range between 7-10. Samples demonstrated line between narratives judged as adequate or inadequate. Clear cut differences between stories told by language disordered children and normally developing children have not emerged and there can be wide variations in the narratives produced by any one child in different contexts and with different levels of motivation.

Edmonds and Haynes (1888) investigated the topic manipulation skills and conversational participation of school-age language impaired children in interaction with normal language peers. The subject's age ranged from 5.11 to 7.11 years. No significant differences between two groups for the number and proportion of topics maintained, topic introduced or topic shaded. However language impaired children did produce significant more topic reintroductions than normals.

Verrall (1989) compared oral and written narative skills of primary school aged children. Ten normally acheiving children from each age group 8 year (3rd grade) and 10 year (5th grade) were taken. similarities and differences between oral and written narratives at the two age levels were examined. Data indicated that the oral and written narratives at both age levels differed significantly only in grammatical analysis.

Strong and Shaver (1991) studied stability of cohesion in the spoken narratives of language impaired and normally developing school-aged children. 39 children in the age range 8-10 years were taken in each of the two groups. Results show that stability increased after children had experienced telling stories.

German and Simon (1991) analysed children's word finding skills in discourse. Sixteen children each were selected in the two groups. One of word finding problems and other of normals in grades 1 to 6. Subjects narratives produced in response to 3 pictures and 5 probes were analysed with respect to following word-finding indices language productivity, incidence of word finding characteristics (repetitions, reformulations, substitutions, delays, empty words, insertions). Group comparisons were made with respect to these indices. children with word finding disorders did not differ from normal children in language productivity but manifested significantly more word finding characteristics in their narratives.

Purcell and Liles (1992) studied cohesion repairs in the narratives of normal language and language disordered school age children (age range -> 8;6 to 12;6, 3 to 8 grade). Self-initiated repairs during story retelling task were seen. No group differences found for either repair type, when grammatical repairs and repairs to text meaning were analysed. Both groups initiated significantly more repairs to text meaning. No group differences for frequency or types of cohesive repairs initiated. However, differences for success of cohesive repair attempts and location of repairs seen.

Gilliam and Johnston (1992) studied spoken and written language relationships in language/learning impaired (LLI) and normally achieving school-age children. The two groups were matched for age, spoken language and reading abilities. Ten LLI of 9-12 years and forty school age children of same age were taken. Results show spoken narratives to be linguistically superior to written narratives in both groups.

A number of tests have been developed abroad to assess the language skills of school-going children. Some of these tests are grouped, as under. Those tests which test a particular language skill are grouped together for eg. tests testing the comprehension of child are grouped together under "Comprehension Tests", test testing expression are grouped together and so on. The common main purpose of the grouped tests is given, a few examples under each group are listed and one test out of them is described to give a general idea about the group.

1. Comprehension Tests:

Purpose: These tests aim to measure auditory comprehension of language; word classes and relations, grammatical morphemes and elaborated sentence constructions and to determine areas of receptive linguistic difficulty.

Age range: These tests are efficient in testing children in age range 3 to 18 + years.

Eg. -Test for auditory comprehension (Carrow, 1985)

-British picture vocabulary scale (Dunn, 1982)

-Test for Reception of Grammar (Bishop, 1989).

For eg. Test for Reception of Grammar (TROG) assess children's understanding of grammatical contrasts in English and compares their comprehension of individual structures with that of their peers. It is a useful test in assessment of children with speech and language disorders, deafness, severe/moderate learning difficulties and cerebral palsy and adults with acquired dysphasia. It aims to pinpoint areas of specific difficulties and to provide a profile patterns of errors.

2. Expression Tests:

Purpose: These tests obtain short samples of spoken language which may then be evaluated in terms of information given and the grammatical forms used.

Age range: These tests may be used with children in the age range 3-16 years.

eg. -Action picture test (Renfrew, 1989)

-The Bus story - A test of continous speech (Renfrew, 1991)

-Carrow elicited language inventory (Carrow-Woolfolk, 1974).

For eg. Carrow Elicited Language Inventory (CELI) measures child's production control of grammar. It helps to diagnose language disabilities and to identify specific linguistic structures with which the child has difficulty.

3. Comprehension and Expression Tests:

Purpose: These tests provide a quantitative and qualitative analysis of a child's receptive and expressive language skills in order to:

1. distinguish between normal and language impaired children.
2. indicate where language problems may be
3. suggest possible approaches to remediation.

Age range: These tests can test children in the age range 2-18 years.

eg. -Test of Adolescent Language-2 (Hammill, 1987),

-Illinois Test for Psycholinguistic Abilities (Kirk, 1968),

-Reynell Developmental Language Scale (Reynell, 1985),

-Porch Index of communicative ability in children (Porch, 1974).

For eg. Reynell developmental language scales (RDLS) assess, as independently as passible expressive language and verbal comprehension (VC 'A' and VC 'B') during the years most important for language development. VC 'B' scale allows asessment of verbal comprehension in severely physically handicapped or withdrawn children.

4. Phonology testa:

Purpose: To elicit spontaneous and representative speech samples of the child's habitual speech patterns which may be used for screening/assessment purposes.

Age range: Children of any age can be tested.

eg. -Metaphor resource Pack (Dean, 1990).

-Phonological assessment of child speech (Grunwell, 1985)

-South Tyneside Assessment of Phonology (Armstrong and Ainley, 1988).

South Tyneside assessment of phonology (STAP) for instance is used to obtain a profile of child's phonological system. It aims at eliciting consonant phonemes and consonant clusters within the contexts of word initial, medial (ie. all intervocalic) and final positions.

5. Pragmatics and Social Skills Tests

Purpose: These tests are used with children whose use of conversational intentions is limited or is impaired. They aim to provide a standardized/norm referenced assessment measuring a specific set of conversational behaviors and intentions.

Age range: These tests are intended for children in the age range 3-16 years.

eg. -Test of pragmatic skills (Shulman, 1985).

-Progress assessment charts of social and personal development (Gunzburg, 1963).

-Social skills training with children and adolescents (Spencer, 1980).

Progress assessment charts of social and personal development (PAC) for example describes qualitatively the strengths and weaknesses of an individual with learning difficulties in relation to others with similar difficulties over 4 areas of social competence and provides a basis for appropriate remedial action to be planned.

6. Language - Written Tests

Purpose: These tests provide a profile of child s ability to cope with vital skills that written language requires. Can

be used as screening procedure for early diagnosis of potential reading/writing problems and as diagnostic procedure for children over 7 years, who are not showing expected progress.

Age range: Can be used with children in age range 5-14 and also with adults having reading and writing difficulties.

eg. -The Aston Index (Newton and Thomson, 1976).

-Test of Reading-spelling patterns (Boder and Jarrico, 1982).

-MacMillan individual reading analysis (Vincent and Marse, 1990).

Neale Analysis of Reading ability (Neale, 1989).

Test of Reading-spelling patterns is used as screening device to identify normal/abnormal reading spelling patterns. It enables abnormal patterns to be classified into subtypes, thus providing pointers for remediation.

7. Bilingual Tests

Purpose: The aim of these tests is to differentiate between the child who has impaired acquisition of both languages (ie. first and second language) and the child who has difficulty only in the acquisition of second language.

Age range: These tests test children ranging from 3-15 years.

eg. -Sentence comprehension Test (Wheldall, 1987).

-Sandwell Bilingual Screening Assessment (Duncan, 1987).

The former test in its revised ed. (Wheldall, 1987) assesses child's ability to comprehend language in the absence of contextual clues which may accompany conversation. In its punjabi ed. (Gibbs, 1987) it tries to establish whether the child's difficulties are specific to acquisition of English as a second language or are pathological.

In contrast to the number of foreign tests, there are only a handful of Indian tests in use today. These tests are limited in number and the areas they assess. Even though it is necessary to have an estimate of both expression and reception capacities, a vast majority of the currently available tests evaluate only the receptive modality. Also, these tests are mainly focussed at assessing the language of pre-school children. Very little attention has been paid to the language assessment of school going children. This will become clear as one goes through the available list of Indian tests.

a) Vocabulary Testa:

eg. - A screening picture vocabulary test in Kannada (Sreedevi, N. 1988)

A screening picture vocabulary test in Tamil (Bhubaneshwari, C.S. 1993).

A Screening Picture Vocabulary Test in Kannada (KPVT) (Sreedevi. 1988)

It is a useful tool in

1. screening language acquisition of Kannada speaking children,
2. identifying those children with comprehension deficiencies,
3. and aiding in therapy planning for such children.

The test is applicable to children between the age range of 3-6 years.

The test material consists of 30 picture plates with each plate containing four black and white drawings. One among the four pictures is the target picture. The test plates are arranged in order of increasing difficulty.

Advantages:

1. Helps in identifying children with delayed or deviant language.
2. Helps in planning therapy programme

Limitations:

1. It is only a screening teat and so descriptive information is not obtained.

2. It is applicable to only those children whose mother tongue is kannada.

3. The test considers only the receptive aspect of vocabulary.

4. The age range considered is limited.

b) Syntax tests:

eg. Test for acquisition of syntax in Kannada (TASK) (Basavaraj, A.R. 1981).

Screning test for the acquisition of Syntax in Kannada (Basavaraj, A.R. 1981).

A syntax screening Test in Tamil (SST) (Sudha, K.M. 1981).

Test for Acquisition of Syntax in Kannada (TASK) (Basavaraj, A.R. 1981)

This test assesses the syntactic aspects of language acquisition in Kannada speaking children between 1-5 years of age, through performance. It yields the acquisition profiles from one to five years of normal language development. Its applications extend to linguistically deviant populations of any age. The test comprises of 19 subtests and 323 items in all. It tests the comprehension

and expression of a wide spectrum of grammatical categories and sentence types. It is a power test (no time limit imposed for completion). Toys and pictures are used as complementary material to the test sentence.

Advantages:

1. The test assess both the receptive and expressive aspects of a wide spectrum of grammatical categories.

2. It is applicable to deviant populations of any age.

Limitations:

1. It is applicable only to a limited age range.
2. The test is valid only when administered to children whose mother tongue is Kannada and who reside a Kannada speaking environment.

c) Tests for assessing language:

eg. -Linguistic Profile Test (LPT) (Karanth, 1980).

-A language test in Kannada for expression in children (Kathyayani, 1984).

-Three dimensional-Language Acquisition Test (3D-LAT) (Geeta, H. 1986).

-Language and Articulation Test (RRTC and AYJNIHH, 1990)

-Malayalam Language Test (Rukmini, A.R.1994).

A Language Test in Kannada for Expression in Children (Kathyayani. 1984).

The purpose is to evaluate the use of various concepts in expression in terms of nouns, verbs, numbers, genders, tenses, place markers and persons. The testing material consists of picture stimuli depicting daily activities and has 30 picture cards in all. It was administered to 30 normal children (5-8 years), 6 hearing impaired and 2 mentally retarded and the responses of these groups with respect to the categories mentioned are given. It gives no cut off point for differentiating the deviant, or scoring procedure as such for the test.

Advantages:

1. It helps in testing various aspects of expression.

Limitatins:

1. Age range is limited
2. Validity is poor
3. No receptive skills are tested
4. The scoring procedure is not clearly defined and hence it is difficult to differentiate normal and abnormal.

Language Acquisition Test (RRTC and AYJNIHH. 1990)

This test was developed in eight Indian languages namely Bengali, Gujrati, Hindi, Kannada, Marathi, Malayalam, Oriya, Tamil. The test was developed to assist in:

1. To identify potential delay and deviance in language and articulation acquition.
2. To identify those who need further detailed evaluation.
3. To specify behaviour needing remediation.
4. To establish baseline functioning prior to therapeutic intervention.
5. To measure behavioural change during the process of therapy.
6. To serve as an indicator for termination of therapy.

The test format was based on LPT (Karanth, 1980), but was picturized for use with children. The test has 2 parts

- Part one - semantics

Part two - syntax.

I. Semantics:

1. Semantic discrimination
2. Naming
3. Lexical category
4. Synonymy
5. Antonymy
6. Homonymy
7. Polar questions
8. Semantic anomaly
9. Paradigmatic relations
10. Syntagmatic relations

11. Semantic contiguity

12. Semantic similarity

II. Syntax

1. Morphophonemic structures

2. Plurals

3. Tenses

4. PNG markers

5. Case markers

6. Transitives, Intansitives, Causatives

7. Sentence types

8. Conjunctives and Quotatives

9. Comparitives

10. Conditional clauses

11. Participal constructions

The age group tested is 3-7 years. The scoring is done section wise and it tests both expressive and comprehensive modalities.

Advantages:

1. It tests both comprehension and expression.

2. It serves as a baseline and monitor for therapy.

3. The test assesses a wide spectrum of linguistic structures.

Limitations:

1. Age group tested is very limited
2. The population on whom the test can be used is language dependent.

d) Teats of Pragmatics:

eg. Test of pragmatics in Tamil (Priya, K.S. 1994)

This test serves as a clinical tool to identify the pragmatically disordered children. This test is based on test design given by Shulman (1986) in the "Test of pragmatic skills" which consists of 4 tasks with examiner probes.

Test design: The test assess 3-8 years old children's use of language to signify conversational intent. A set of 4 guided play interactions (tasks) serve as the medium through which these pragmatic behaviors are assessed. Each task is administered using the materials and dialogue (examiner probes) provided. The test is designed to provide information an 10 categories of communicative intentions expressed by the children. They are:

1. Requesting information
2. Requesting action

3. Rejection/Denial
4. Naming/Labeling
5. Answering/Responding
6. Informing
7. Reasoning
8. Summoning/Calling
9. Greeting
10. Closing conversation

The responses are scored on a rating scale ranging from 0 to 5 according to the appropriateness and linguistic sophistication of the child's responses to probes.

Advantages:

1. The test assess pragmatic skills in different contexts and as the materials and probes used are constant, it makes the test more objective and reliable.
2. Test uses a five point rating scale to give more accurate and quantitative outcome. This contributes to better inter-professional communication which is essential for successful rehabilitation of the child.
3. Helps to quantify the improvement seen after therapy, in pragmatic skills. Thus, evaluating the efficacy of therapy.
4. Since it is more objective, it has better face validity.

Limitations:

1. It is applicable to only those children whose mother tongue is Tamil and reside in Tamil speaking environment.
2. Age range is limited.
3. Number of subjects under each age group is only 5 ie. small sample size.

So, it canbe easily seen the above section that the tests available in Indian languages are insufficient in the variety of purposes and age ranges they test.

In a study by Suchitra and Karanth (1990) Linguistic Profile Test was found to be effective in testing the language disorders in school going children, as it gives sufficient information of different areas of language tested, over a wide age range.

The Linguistic Profile Test, henceforth referred as LPT was designed with the objective of evaluating and analyzing adequate linguistic samples at the phonological, syntax and semantic levels. The test was designed originally a decade ago (Karanth, 1980a) in Kannada and was called as the "Test

of psycholinguistic abilities in Kannada. The framework of the test is such that, it can be easily constructed in any language. Over the last ten years, the test has been extensively used with clinical populations (both adults and children) and has been found clinically useful, both for evaluation and as a basis for rehabilitation and linguistic retraining of communicatively disabled (Karanth, 1980a and b; 1981; 1984; 1988; 1990; 1991). During this period the test has undergone some revisions. A parallel version of the test was developed in Hindi (Karanth, Pandit, Gandhi,1986). Data on 200 normal adults and 123 stroke patients Including aphasics and non-aphasics. (Karanth, Ahuja, Nagaraj, Pandit and Shivshankar, 1991) has been collected and analysed. A picturized version of the test for young children of 3-7 years of age has been constructed and field tested (UNICEF funded project RRTC, Madras and NIHH,Bombay) in seven Indian Languages including Kannada, Hindi, Tamil, Oriya, Gujrati, Marathi and Bengali. Though the test was developed for adult aphasics but recently it has also formed the basis for Language Acquisition Test. Normative data on 150 children inthe age range 6 to 11 years has already been collected in Kannada (Suchitra and Karanth, 1990) and from 11 to 14 years is in progress.

The LPT has 3 major sections including phonology, syntax and semantics respectively, with discourse forming the tail end of the third section. The choice of methods within these sections covers a wide range of tasks such as pointing, repetitions, naming, indication of grammatical and semantic acceptability, listing of lexical categories, sentence completion, matching synonyms and antonyms etc. (Karanth, 1980 a and b).

The current study was taken up, as Hindi is a widely spoken language and there is a lack of normative data in Hindi for school going population.

CHAPTER III

METHODOLOGY

AIM: To establish normative data scores in Linguistic Profile test (LPT) on school going children in the age range of 6+ years to 15+ years.

SUBJECTS: Twenty children each from grade I to X ranging in age from 6+ years to 15+ years were the subjects in the current study.

These children were:

1. Healthy normal children with no physical or sensory disabilities.
2. Native speakers of Hindi
3. Were studying in Hindi medium
4. Studying in a Government school
5. From upper middle socioeconomic strata
6. Had attended the primary classes ie. nursery and kindergarten before joining the first class.

More subject details are given in Table-1.

Table-1: Age groups and the number of subjects in each group.

Age group (in years)	No. of subjects		
	Males	Females	Total
6+	11	09	20
7+	14	06	20
8+	14	06	20
9+	05	15	20
10+	12	08	20
11+	09	11	20
12+	10	10	20
13+	14	06	20
14+	14	06	20
15+	09	11	20

LINGUISTIC PROFILE TEST:

This test has three major sections (1) Phonology (2) Syntax (3) Semantics.

(1) Phonology: There are two subsections in the phonology section.

(i) Phonemic discrimination in which there are 24 items. The subjects were asked to point out two pictures out of a set of four, on hearing the minimal pairs,

(ii) Phonetic expression in which there are 52 items. The subjects were asked to repeat the words after the tester.

(2) Syntax: There are ten subsections in the syntax section.

a) Morphophonemic structures

b) Plural forms

c) Tenses

d) PNG markers

e) Case markers

f) Transitives, Intransitives and Causatives

g) Sentence types

h) Conjunctions, Quotatives and Comparitives

i) Conditional clauses

j) Participal constructions.

A total of 130 items were tested under all these subsections. The subjecs were asked to judge whether the given sentences were grammatically correct or wrong. This is known as grammaticality judgement task which is a metalinguistic ability. "Metalinguistic ability" refers to one's ability to reflect upon one's language, appreciate and

even talk about it. In making acceptability judgements, the individuals not only check for proper grammatical formulation of sentences but also semantic coherence of the same. Hence, it means that making language judgements retrieving and making use of one's language judgements - retrieving and making use of one's intutions is relatively hard, when compared to talking and understanding. This is because, in giving a language judgement, "one must take a prior cognitive process (linguistic performance) as the object of a yet higher order cognitive process (reflection about language performance, or metalinguistic performance) which may have properties of its own" (Gleitman and Gleitman, 1979).

(3) Semantics: There are two major sub-sections in this section (a) Semantic discrimination (b) Semantic expression.

In the first sub-section, discrimination of colours, furniture and body parts was tested. The subjects were asked to point the colour, object or body part named. A total of 15 items were tested.

In the second subsection expression ability was tested under the following tasks:

1) Naming

2) Lexical category

3) Synonymy

4) Antonymy

5) Homonymy

6) Polar questions

7) Semantic anomaly

8) Paradigmatic relations

9) Syntagmatic relations

10) Semantic contiguity

11) Semantic similarity

The instructions for each task was given differently based upon the type of expressive ability being tested.

ADMINISTRATION AND SCORING

The testing was done in a quiet classroom situation.

The administration of 76 items of the phonology section of LPT entailed instructing the subject that he would hear a minimal pair in the phonemic discrimination task and he would have to point to the pictures presenting the pair out of a set of 4 pictures.

In the phonetic expression sub-section, the subjects were asked to repeat verbally after the tester. The total score of phonology section was 100.

In the 130 items of syntax section of LPT the subjects were instructed that they would hear a list of sentences/words; some of which were structurally well formed while some were not. Each subject was given examples of both correct and incorrect sentences. The subject was asked to listen carefully to the items that would be auditorily presented and indicate whether each item was corrct or incorrect. The test items were presented auditorily one after the other with adequate time between items for the child to respond. The total score of semantic section was 100.

In the 85 items of semantics section based upon the type of task involved, the instructions were given. The score of this section also summed up to 100.

ANALYSIS

The subjects responses were scored and tabulated and the mean and standard deviation of LPT scores for each age

group under each section were computed. Further, one factor Analysis of Variance) was used to find out the significance of difference between means. The results are reported and discussed in the following chapters.

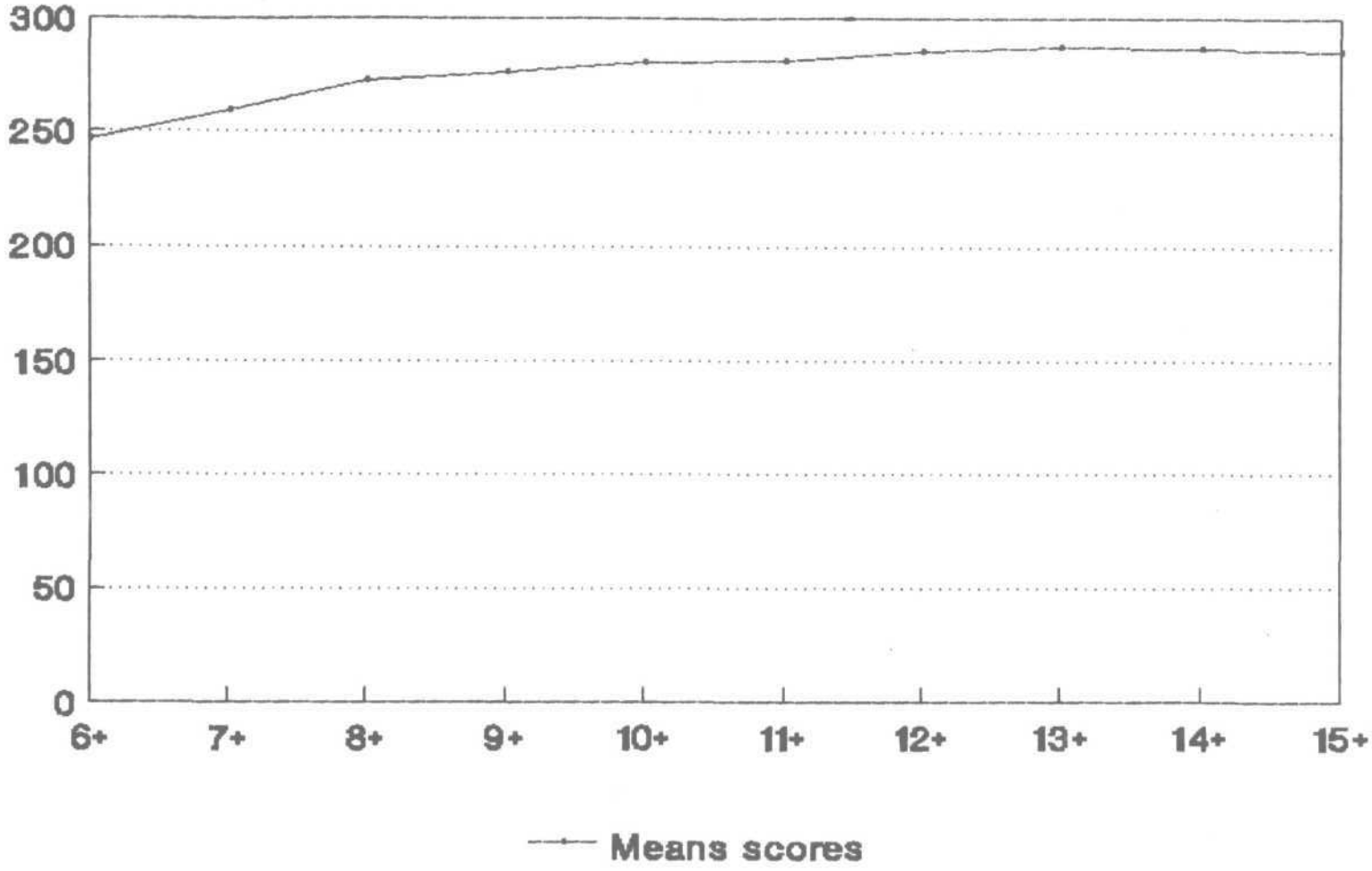
CHAPTER IV

RESULTS AND DISCUSSION

The mean and standard deviation of LPT scores (total scores) are given in Table 2 and are graphed in Graph 1. The results indicated that the mean scores ranged from 246.73 to 287.55. The total scores increased from 6+ years to 15+ years.

Table-2: Mean and S.D. of LPT scores.

Age group (in years)	Means scores (Total scores)	S.D.
6+	246.73	14.95
7+	258.82	10.91
8+	272.12	9.05
9+	276.30	7.74
10+	280.35	6.21
11+	281.17	7.14
12+	285.75	2.97
13+	287.55	3.85
14+	286.55	5.58
15+	285.82	5.94



GRAPH 1.

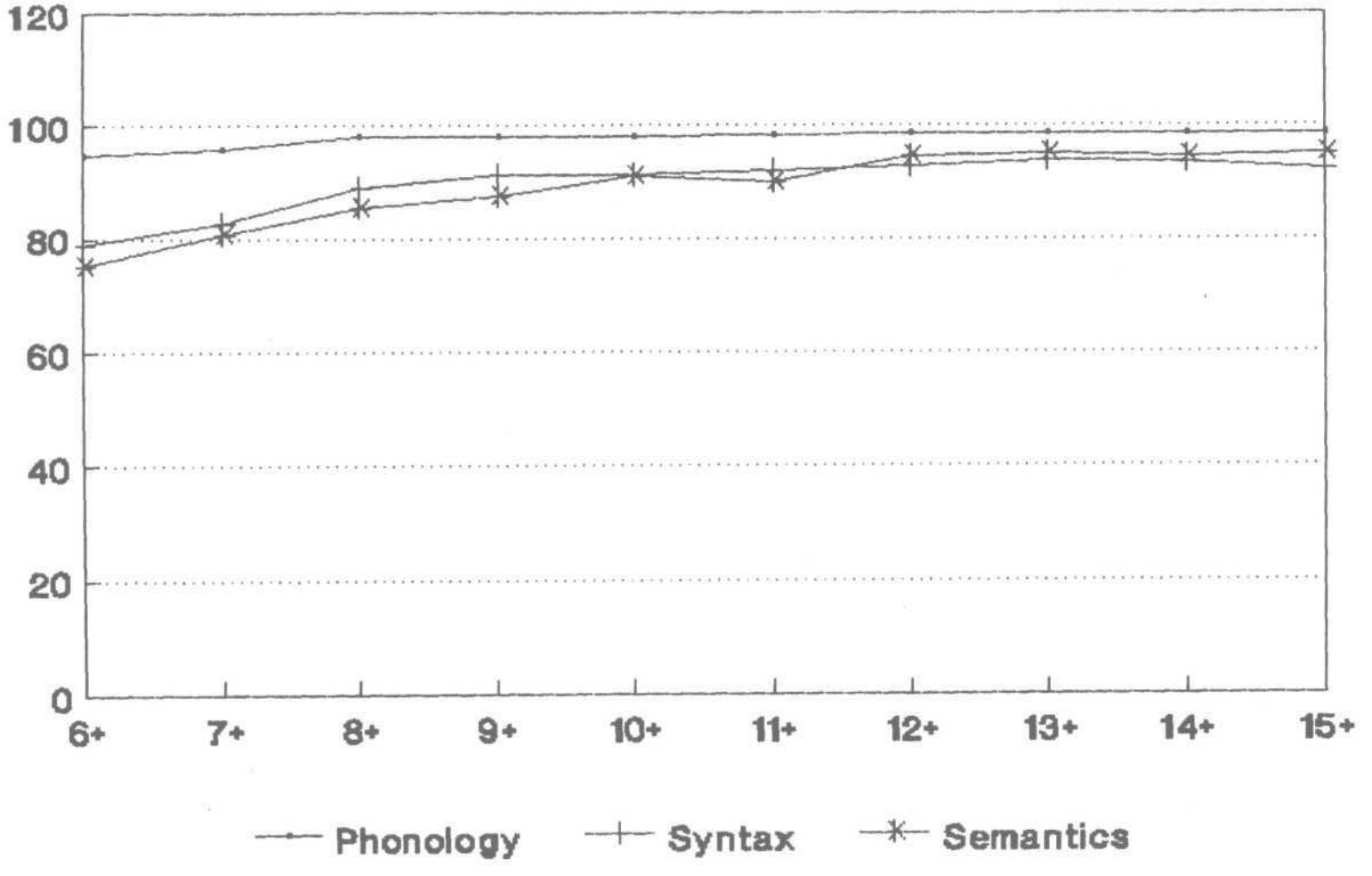
The mean total scores and standard deviation of the three sections of LPT, namely phonology, syntax and semantics ae given in Table 3 and are grphed in Graph 2. One way Analysis of Variance (ANOVA) was used to find out the significance of difference between means, the results of which are given in Table 4.

Table-3: Mean and SD for different age groups.

Age group (years)	Phonology		Syntax		Semantics		Total Scores	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
6+	94.9	3.11	78.85	7.53	75.07	6.79	246.73	14.95
7+	95.85	1.75	82.57	6.08	80.71	6.12	258.82	10.91
8+	98.05	1.23	89.10	4.71	85.37	5.60	272.12	9.05
9+	98.15	1.22	91.27	2.88	87.47	5.61	276.30	7.74
10+	98.05	1.90	91.27	2.95	91.02	3.33	280.35	6.21
11+	98.40	1.81	92.07	2.57	90.07	3.46	281.17	7.14
12+	98.60	1.27	92.70	2.65	94.45	2.86	285.75	2.97
13+	98.65	1.08	93.77	1.88	95.15	3.58	287.55	3.85
14+	98.65	1.22	93.47	2.61	94.42	3.41	286.55	5.58
15+	98.57	1.40	92.22	3.29	95.05	3.11	285.82	5.94

NOTE: Maximum score for each section is 100.

Maximum total score is 300.


120
100
80
60
40
20
0
6+
7+
8+
9+
10+
11+
12+
13+
14+
15+
Phonology
Syntax
Semantics

GRAPH 2.

It was observed that the Mean scores obtained for phonologywas significantly higher than that for syntax and semantics. In all the three tasks there was a sudden change in performance between the ages of 7-8 years and the scores in all the tasks increased as a function of age. From the age of 6+ to 11+ years the chidren obtained highest scores in phonology followed by syntax and semantics. However children in the age group of 12+ years to 15+ years, obtained highest scores in phonology followed by semantics and syntax.

From the mean scores obtained by the children in these ten groups, it was evident that there was a gradual but consistent increase in scores, with a sharp rise around the age of 7-8 years for all the three sections of LPT. The results showed a high level of phonological development through the age range studied. Analysis of variance (ANOVA) results show: (Table 4) : -

1. There is significant difference in the total mean scores between the age groups up to 8 years of age.
2. Significant difference between the age groups in phonology section was observed only upto 7 years of age.
3. Significant difference in syntax section was also observed only upto 7 years of age.
4. There was a significant difference between the age groups in semantics section upto 9 years of age.

Table-4: Significance of the difference between means (ANOVA). * indicates significant difference at 95%

Age groups	Total Scores	Phonology	Syntax	Semantics
6+ vs 7+	*	-	-	-
6+ vs 8+	*	*	X	X
6+ vs 9+	*	*	X	X
6+ vs 10+	*	*	X	X
6+ vs 11+	*		X	X
6+ vs 12+		X	X	X
6+ vs 13+	*		X	X
6+ vs 14+	*	*	X	X
6+ vs 15+	*		X	X
7+ vs 8+	*	-	X	-
7+ vs 9+	*	*	X	X
7+ vs 19+	*	-	X	X
7+ vs 11+	*	*	X	X
7+ vs 12+	*		X	X
7+ vs 13+	*	*	X	X
7+ vs 14+	*	*	X	X
7+ vs 15+	*	*	X	X
8+ vs 9+	-	—	—	—
8+ vs 10+	-	-	-	-
8+ vs 11+	-	—	-	—
8+ vs 12+	*	—	-	X
8+ vs 13+	*	—	-	X

Age groups	Total Scores	Phonology	Syntax	Semantics
8+ vs 14+	*	-	-	*
8+ vs 15+	*	—	-	
9+ vs 10+	-	—	-	-
9+ vs 11+	-	-	-	—
9+ vs 12+	-	-	-	*
9+ vs 13+	*	-	-	*
9+ vs 14+	-	-	-	*
9+ vs 15+	-	-	-	X
10+ vs 11+	-	-	-	-
10+ vs 12+	-	-	-	-
10+ vs 13+	-	-	-	-
10+ vs 14+	-	-	—	-
10+ vs 15+	-	-	—	-
11+ vs 12+	-	-	-	-
11+ vs 13+	-	-	-	—
11+ vs 14+	-	-	-	-
11+ vs 15+	-	-	-	-
12+ vs 13+	-	-	—	-
12+ vs 14+	-	-	-	-
12+ vs 15+	-	—	-	—
13+ vs 14+	-	-	-	-
13+ vs 15+	-	-	-	—
14+ vs 15+	-	-	-	-

In the earlier study (Karanth, 1984), children below 6 years were unable to carry out the task on section II syntax - which calls for judgement of syntactic acceptability of a given item. These children tended to accept or reject all given items without discrimination. At around 6 years of age, children were found to attempt the task and perform at a chance level of 50, gradually achieving about 95% proficiency by about 15 years of age, with a sharp rise in grammaticality judgement ability between 6-9 years of age. The mean total scores in Section II ie., syntax ranges from (78.85 +/- 7.53) to (93.77 +/- 1.88) from Grade I to Grade X with Grade VIII showing the maximum mean total scores. Improvement in mean total scores is evident from 8+ years onwards.

In view of the fact that a chance factor is high in the younger age groups in grammaticality judgement tasks, the Grammaticality Sensitivity Index (A') as given by Linebarger, Schwartz and Saffran (1983) was computed for each child in the present study. The Grammaticality Sensitivity Index (A') is a nonparametric index of sensitivity based upon the estimated area under the receiver operating - characteristics (ROC) curve which is theoretically equal to the proportion of correct responses

attainable in a two alternate forced choice procedure and as such provides a pure measure of sensitivity.

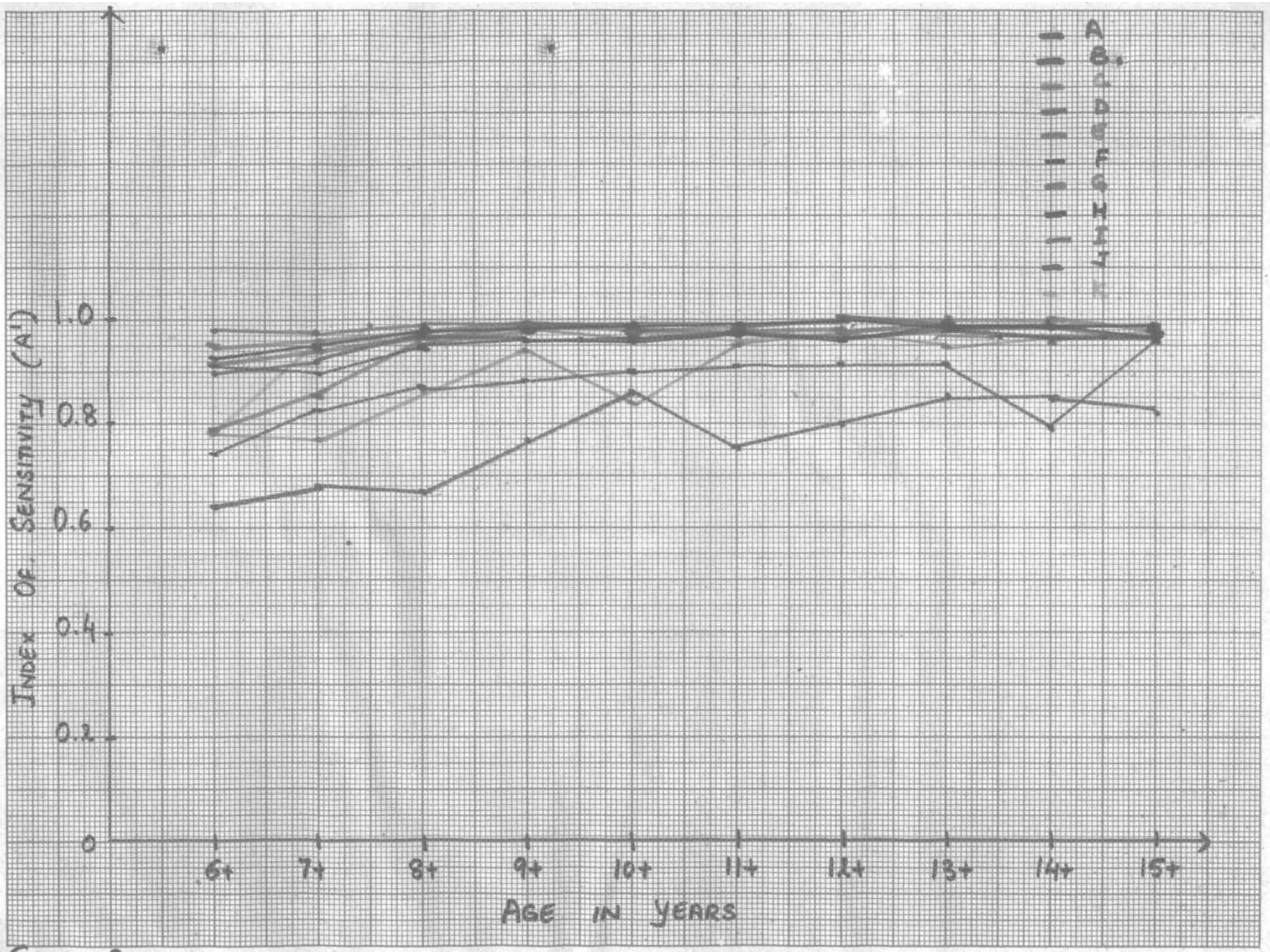
The mean scores of Index of sensitivty A' obtained by the different age groups on the different syntactic stuctures in the current study is given in Table 5 and are graphed in Graph 3.

The average value A across the ten age groups can be seento increase from 0.84 to 0.96 indicating an increase in grammatical sensitivity with an increase in age. However, the maximum sensitivity (A'=1.0) was not attained even by the age of 15+ years.

The findings clearly showed a differntial rate of acquisition of grammatical sensitivity across these categories. The sensitivity to PNG markers and case markers was already high throughout. On the other hand, sensitivity to morphophonemic structure was lowest at age 6-7 years and increased gradually reaching only 0.82 at the highest level being tested here ie. 15+ years. In contrast sensitivity to conjunctions, comparatives and quotation was low in the age group of 6+ years and 7+ years, increased dramatically within the next year (8+ years) and the same was maintained across the older age groups. The other subcategories fall

Table-5: Mean scores of index of sensitivity (A') for different age groups.

S. No.	Item	Age groups (years) 6+	7+	8+	9+	10+	11+	12+	13+	14+	15+
A.	Morpho-phonemic structure	.64	.68	.67	.77	.86	.75	.80	.85	.85	.82
B.	Plura forms	.90	.92	.97	.96	.96	.97	.96	.98	.97	.97
C.	Tenses	.78	.77	.86	.94	.84	.95	.97	.95	.95	.97
D.	PNG markers	.98	.98	.99	.99	.99	.99	1.0	.95	.95	.97
E.	Case markers	.95	.96	.98	.99	.98	.99	.98	1.0	1.0	.99
F.	Transi-tive Intr-ansitive + causatives	.91	.90	.95	.96	.96	.97	.98	.99	.99	.97
G.	Sentence types	.91	.94	.98	.99	.98	.99	.99	.99	.99	.99
H.	Predl-cates	.93	.95	.98	.98	.99	.98	.99	.99	.99	.99
I.	Conjunc tions com-paratives & quota-tion	.79	.85	.95	.98	.97	.97	.98	.96	.98	.96
J.	Condi-tional clause	.74	.83	.87	.88	.90	.91	.91	.91	.79	.89
K.	Parti-pal con-struction	.79	.98	.98	.97	.97	.98	.99	.98	.99	.97
	X	.84	.89	.92	.94	.94	.95	.96	.96	.95	.96



GRAPH 3.

MEAN SCORES OF INDEX OF SENSITIVITY (A') OF ELEVEN ITEMS (SYNTAX SECTION) OF LPT FOR DIFFERENT AGE GROUPS

in between these extremes indicating differential sensitivity to different syntactic structures at various ages. But there was an overall increase in sensitivity to all the structures tested across the age ranges studied here. The various subcategories were also ranked in order of decreasing scores (based on the sensitivity index) within the category with the highest score being ranked 1 and the lowest 11. The results are tabulated in Table 6.

As seen from the table it was evident that PNG markers and case markers were the most sensitive in all the ten age groups studied here. The items on sentence types, predicates, participal construction, conjunctions, comparatives and quotation, plural forms and transitive, intransitive and causatives were relatively more sensitive compared to the rest of the items, showing a developmental trend across the age group studied here. The items on tenses and conditional clauses exhibited a low sensitivity throughout. The item on morphophonemic structure exhibited lowest sensitivity across all the age groups studied here.

The mean scores and standard deviation for the different items of the semantic section are given in Table 7.

Table-6: Ranking of sub-categories (items of syntax section) based on sensitivity Index

6+ years		7+ years		8+ years		9+ years		10+ years		11+ years		12+ years		13+ years		14+ years		15+ years	
Rank	Items	Rank	Items	Rank	Items	Rank	Items	Rank	Items	Rank	Items	Rank	Items	Rank	Items	Rank	Items	Rank	Items
1	D	1.5	D&K	1	D	2	DE&G	1.5	D&H	2	DEG	1	D	1	E	1	E	2.5	DEGH
2	E	3	E	3.5	EGHK	4.5	H&I	3.5	E&G	4.5	H&K	3	GH&K	3.5	DFG&H	4	DFGH&K	6.5	BCFK
3	H	4	H	6	B	6	K	5.5	I&K	7	BFI	5.5	E&I	6.5	HK	7	B	9	I
6	B	6	B	9	J	9	C	9	J	10	J	8.5	B&F	9	C	8	I	10	J
7.5	I&K	7	F	10	C	10	J	10	A	11	A	10	J	10	J	9	C	11	A
9	C	8	I	11	A	11	A	11	C			11	A	11	A	10	A		
10	J	9	J													11	J		
11	A	10	C																
		11	A																

Table-7: Mean and S.D. for different items of the semantic section of L.P.T.

Item No.	6+		7+		8+		9+		10+		11+		12+		13+		14+		15+	
	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD	X		X		X	
A																				
1	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0
2	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0
3	3.2	1.50	2.75	1.33	3.2	1.50	3.35	1.53	3.95	1.46	3.2	1.50	4.55	1.09	4.4	1.23	3.95	1.46	3.8	1.50
B																				
1	17.95	0.92	18.55	0.94	19.10	0.91	19.50	0.68	20	0	20	0	20	0	20	0	20	0	20	0
2	6.2	1.96	7.7	2.59	8.5	1.76	9.15	2.87	9.13	3.56	10.15	1.81	10.95	2.48	11.85	2.39	11.75	2.24	12.2	2.39
3	1.25	.91	2.8	1.43	3.6	1.18	3.89	.93	4.35	.81	4.45	.82	4.75	.63	4.75	.55	4.5	.82	4.85	.48
4	3.9	.91	4.55	.60	4.5	.68	4.9	.3	4.9	.44	4.85	.48	4.95	.22	4.9	.3	5	0	4.94	.22
5	2.52	1.06	3.5	.89	2.97	1.49	3.87	.50	3.92	.37	4.3	.37	4.65	.32	4.75	.5	4.58	0.67	4.9	.20
6	8.75	.96	9.55	.51	9.9	.3	8.6	.96	9.45	.68	9.55	.75	9.8	.52	9.5	.82	9.65	.58	9.65	.48
7	4.55	.75	4.5	.76	4.65	.67	4.9	.3	5	0	4.85	.48	5	0	5	0	5	0	4.94	.22
8	3.85	.74	3.9	.83	4.65	.67	4.8	.41	4.9	.3	4.95	.22	5	0	5	0	5	0	5	0
9	4.1	.64	4.2	.69	4.7	.57	4.7	.47	4.8	.41	4.9	.3	5	0	5	0	5	0	5	0
10	4.35	1.42	4.4	1.04	4.95	.22	4.9	.44	4.75	.63	4.7	.65	4.8	.61	5	0	4.9	3	4.85	.48
11	4.35	.81	4.7	.47	4.95	.22	5	0	4.95	.22	4.9	.3	5	0	5	0	5	0	5	0

Under the semantic section, better performance was observed for items in section IIIA -Semantic Discrimination as against Section IIIB - Semantic expression. The mean total scores for most of the items in Section IIIA (Semantic Discrimination) was higher (with scores reaching maximum level even for the lowest age group when compared to scores in Section IIIB Semantic Expression) where differential performance was observed for the items across all age groups studied here. Better performance for item No.l and 2 (ie. colour and furniture) as against the item No.3 (Body parts) was found. Maximum scores have been obtained even by children of 6+ years age group on item No.l and 2, whereas the findings for the item No.3, indicate a gradual improvement in performance with the best performance in the age group 12+ years.

The mean scores on item No.l - Naming, under section IIIB - Semantic expression, indicated an overall better performance compared to other items in this section. There was a gradual improvement in performance from 6+ yers on this item (ie. naming) with maximum scores being attained by 10+ years of age group, and remained high throughout thereafter. It maybe seen that while the performance on semantic discrimination was already high (Maximum scores were attained even at the lowest age group studied ie. 6+

years) the performance on item No.3 and 5 ie. synonyms (matching pairs with identical meaning) and Homonyms (providing alternate meanings for words) was poor upto 10+ years when compared to other items in the same section (ie. Semantic Expression). The scores obtained by children after 10+ years age group on item No.3 and 5 were good. The other items fall in between these extremes indicating differential performance to different semantic structures at various ages. An overall increase or better performance for all items was obvious across the age range studied ie. with increase in age, the performance was better. Better performance was observed for items Nos. 4, 6, 7, 8, 9, 10, 11 (ie.Antonyms, polar questions, semantic anomaly, paradigmatic relations, syntagmatic relations, semantic contiguity, and semantic similarity respectively) and a comparatively poorer performance was observed for item No.2 (lexical category).

Thus the findings in the semantic section of this study were similar tothose in syntax section ie. maximum scores were not obtained even by the oldest age group studied (ie. 15+ years).

DISCUSSION:

The findings in the phonologic section were in agreement with the findings of the earlier study by Suchitra and Karanth (1990) who had done a similar study in Kannada and confirmed the earlier observation that phonological development was almost complete by the time the child reaches 6 years and beyond their the same level was maintained. However, children in the present study started with comparatively higher scores in 6 years age range than children in earlier study (Suchitra and Karanth, 1990). Progress thereafter seen in following age groups and a maximum constant score maintained after 11 years of age, whereas in earlier study (Suchitra and Karanth, 1990) children at 6 years of age started with a comparatively low scores and reached the maximum constant score by 11 years of age.

The findings in the syntax section ie. a significant improvement inthe mean total scores from 8+ years, were in agreement with those reported by Bohannor (1976), Karmiloff-Smith (1979), Hakes (1980), Vanleek (1982), Tunmer and Bowey (1982), Suchitra and Karanth (1990). However, in this section also, it was seen that children of the current

study, in the age group 6+ years started with comparatively higher scores than those in the study by Suchitra and Karanth (1990) and this superiority in scores was maintained throughout all the age groups.

The overall findings of the syntax section of the current study confirmed the findings of the previous studies (Karanth, 1984), (Suchitra and Karanth, 1990) and were in agreement with the conclusion of the earlier study that adult like sensitivity to grammaicality judgement is acquired by adolescence. The findings that beginning around 6-7 years, children are gradually able to make judgements more like adults by eavaluating the properties of the sentences was also in agreement with the earlier observations of Bohannon (1976), School and Ryan (1980), Hakes (1980), Suchitra and Karanth (1990). The findings of this study are also in consonance with Karmiloff-smith's (1979) assertion that by age of 8 years the child has attained a more abstract level of linguistic competence with which he can cope without functional, semantic and pragmatic procedures of normal language usage. In a more recent study on grammaticality judgement tasks, carried out in India, Vasantha, Shastry and Maruth (1939) report similar findings that an increase in grammatical judgement ability is seen from 4.5 to 8.5 years with a dramatic improvement around 6.5

+ 7 years. Vasantha et al. conclude that by about the age of 8 to 8.5 years an asymptote is reached by which time the performance is almost adult like. However the results of the present study are in agreement with results of the earlier study by Suchitra and Karanth (1990) indicating that this might be true only of the particular structures included in their study. With the inclusion of more complex structures the increase in grammatical judgement ability can be shown to increase until 12-14 years of age (Karanth, 1984) and is also evident from the findings of the current study where maximum sensitivity (A=1.0) is not attained even at 15 years of age. However, two differences were noted in the results of grammatical judgement ability between the current study and study by Suchitra and Karanth (1990). Firstly, the mean scores of Index of sensitivity for different age groups were superior in the current study than that by Suchitra and Karanth (1990). Secondly, in the current study in the ranking of items of syntax section based on sensitivity index it was found that PNG markers and case markers were the most sensitive in all the ten age groups and Morphophonemic structure exhibited the lowest sensitivity, whereas in study by Suchitra and Karanth (1990) plural forms were the most sensitive and participal construction were the least sensitive.

The findings in the semantic section, ie. for items in Section IIIA are in agreement with the study by Hulttenlocher, Smiley and Ratner (1974) wherein, it is reported that the object concepts seem to be among first "natural language concepts" to be acquired. Children comprehend and produce words which group perceptually similar objects, both animate and in animate by approximately 14 months (Goldin Meadow et al. 1976, Huttenlocher, 1974). The information involved in the categorization is perceptual and may be representable in the form of prototypes or images of the average unit. This early emergence might be also due to their having been named more frequently than any other category (Huttenlocher, Smiley and Ratner, 1983). Istomina (1963) and Johnson (1977) from their study report that even though among the earliest adjectives in children's vocabulary are colour words, yet young children are notoriously bad at using colour words appropriately. However, in the present study even the children in the age group of 6 years scored maximum on colour words and this was maintained through all the age groups. This difference in the results of two studies can be attributed to the type of stimulation received by the children and frequency of the colour words being named. Body parts being acquired the last out of the three

categories (ie. colours, furnitures and body parts) is in agreement with the earlier study by Suchitra and Karanth (1990), though difference was noted in the scores. In study by Suchitra (1990) scores on body parts reached maximum by 11 years age group whereas in the present study even the 15 years age group children could not achieve maximum scores. This difference may be due to the constant use of English words to represent body parts than Hindi in day to day life. The main problem by these children was faced in left and right identification. They could identify a body part when the side wanted (ie. left or right) was spoken in English but could not do the same when side was asked in Hindi ie. /baja/ or /daja/.

The findings for items in section IIIB agree with those of Bower (1974) wherein earlier recognition of familiar persons and objects in many different orientations and contexts by about 6-7 months has been reported starting that cognitive abilities that are pre-requisite for learning proper names are present well before speech.

The results of studies on similar items as lexical category, synonymy, antonymy, polar questions, semantic anomaly, paradigmatic relations, semantic contiguity, semantic similarity of LPT indicate that the findings are on

similar lines with that of the present study. Howe and Hillman (1973) found in their study that even four year olds showed some ability to discriminate between sentences that violate selectional restrictions and ones that do not. Research on children's abilities to judge that sentences are ambiguous also suggest that this ability increaseg considerably during middle childhood and even beyond (Kessel, 1970) (Schultz and Pilon, 1973). The performance of 6 years olds was poor for all kinds of ambiguities tested. Acceptability tasks involving semantic restrictions have also been studied by Howe and Hillman (1973) and James and Miller (1973). Their study indicated that both 5 and 7 year old were capable of distinguishing between meaningful and anomalous sentences involving animate or + human selection. The results of the current study are in agreement with the studies of Howe and Hillman (1973), James and Miller (1973) and Suchitra and Karanth (1990). Even the youngest age group in the current study (6+ years) have correctly judged the sentence No.3, of item 7 (ie.semantic anomaly) whereas poor performance in terms of judging and explaining the ambiguity is found for sentences No. 1, 2, and 5 in the same item. Sentence No.4 has been accepted as anamalous even by the youngest group. These findings are in line with the findings of Huttenlocker, Smiley and Ratner

(1983) who report that the earliest adjectives to appear in spontaneous speech in data are not words for inherent properties of objects like colour or shape rather they are temporary states such as hot, wet etc. In contrast to either object or inherent properties or temporary states, relational properties (eg. big, small) involve a relational notion namely the comparison of a target object to some standard. Bartlett (1976) reports that children comprehend the comparative sense of big and small by 2.5 yers. Nelson and Benedict (1974) report that second class relative appears only after the age of 6 years. Words that specify relationships between people, objects and events occur quite early in child's language, but the meanings of most relational words are not acquired in all their complexity until the child is 4 or 5 years or older (de Villiers and de Villiers, 1982). Several studies have devised language games to test children's knowledge of spatial adjectives. Clark (1972) reports of a consistent order of difficulty of spatial adjectives in the opposite game. So also in the study by Carey and Considine, (1973). the youngest children in clark's study with a mean age of 4.4 could produce semantically appropriate responses to big and small, whereas only 82% and 80% gave appropriate responses to long/short and tall/short respectively. For other spatial adjectives, the percentage of appropriate responses was 45% for

high/low, 12% for thick/thin, 7% for wide/narrow, 2% for deep/shallow. Care and Considine (1973) have noted that the relative frequency with which each pair appears in the language of adults (Kucere and Francis, 1967) and in the speech of 5 year olds (Wepman and Hess, 1969) also partially predicts the order of difficulty of these adjectives for children. Similar findings are observed in the current study.

Sack and Beilin (1971) report that the ability to judge synonymy emerges later than the ability to understand the sentences being judged. The results of this study suggest that there is a substatial development during middle childhood of children's ability to judge synonymy and that this development occurs later than the development of the ability to understand the sentences judged. Further, they also suggest that younger children (first graders and younger) may perform systematically worse than chance on synonymous sentence pairs.

More recently, attention has been focussed on linguistic developments occurring after age of 4-5 years, around the time when children begin to learn to read. Research (Tunmer and Bowey, 1984) on the nature of

linguistic development during middle childhood (the period from 4-8 years) reveals that not only is there continuation of earlier developmental processes, but there emerges a new kind of linguistic functioning, which has been referred toas Metalinguistic dvelopment. Hakes (1980) reports that the review of existing literature suggests that during middle childhood a wide variety of linguistic abilities - those characterized as metalinguistic show striking development where the studies sought to examine the developments occurring between the ages of 4-8 years in diverse metalinguistic abilities.

According to Flavell (1978, 1981) the development of all meta-abilities, including metalinguistic awareness is thought to occur gradually over a period of years during childhood.

The finding that, children in all the age groups in all the three section of LPT (ie. phonology, syntax, semantics) in the current study have scored better than the earlier study in Kannada (Suchitra and Karanth, 1990) can be attributed to the environment of the children, type of stimulation they are getting at home, type and mode of education, standards of the school and to the fact that all of these children hail from a metropolitan city.

Results of ANOVA carried out for the three sections of LPT, ie. phonology, syntax and semantics to determine significant of difference between the performance of the different age groups in LPT suggests that LPT (Hindi) is more useful in the younger age group ie. from 6+ years to 9+ years than the older age group, but it can be a useful tool in identifying a disordered language in older age group too ie. from 10+ years to 15+ years.

The overall findings in the current study which is in concurrence with the results of the earlier studies Karanth (1984), Rangasayee et al. (1988), Suchitra and Karnath (1990) and Kudva (1991) indicate the following:

As the difference in the younger age groups ie. 6+ and 7+ years is not statistically significant the picturized version of the test (RRTC Test battery) has been found to be useful for the younger age groups ie. below 7 years.

LPT can be used for evaluating children above 7 years of age, the difference of scores in these age groups being statistically significant for the total scores as well as for the three sections of LPT. In the phonology section, where most of the phonological development is complete by 6

years, the test (LPT) ca nbe used to check phonological competence in children.

The Linguistic Profile Test can also be used as a basis for therapeutic programme ie. the performance of an individual with reference to items within each section can be looked into by the therapist for eg. in syntax section the performance on different structures can be observed and noted down and appropriate steps for remediation can be planned. In semantics section, an idea about the acquisition of concepts which are included in these items is of great help in planning speech-language therapy especially in young children with speech-language-hearing disorders who are yet to learn the basic aspects of speech-language.

CHAPTER V

SUMMARY AND CONCLUSIONS

The present study was undertaken to establish the normative data on Linguistic Profile Test (Hindi) for school going children in the age range 6+ years to 15+ years. A total of 200 students with 20 students in each age group were taken up for the study. The subjects were native speakers of Hindi and were studying in a Government Hindi medium school. The subjects were evaluated and scored on each section of the test and a quantitative statistical analysis of the results was carried out. The results indicate that there is a gradual but consistent increase in scores for all the three sections of LPT across the age range studied. Results also show a high level of phonological development through the age range studied. The results thus lead us to the conclusion that Linguistic Profile Test is useful for identification of language disorders and also in finding out the area of deficit. Individual linguistic profiles give a clear picture of the performance at various levels. The profiles can also be used for re-evaluation for assessing progress from time to time and as a basis for therapeutic programmes.

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SECTION I—B: Phonetic Expression

Instructions: Ask the subject to repeat each word clearly after you. If the subject is unable to repeat the wo give him the written form of the word and ask him to read it aloud. If he fails to do so then give him t appropriate picture and ask him to name it. Score 1 for each correctly repeated/read/named target soun Errors involving phonemes other than the target phoneme should not be scored but taken into account duri qualitative analysis.

Sl. No.	Stimulus Word	Subject's Responses			Accuracy Response
		Repetition	Reading	Naming	
1.	अनार				
2.	आम				
3.	इमली/इंजन				
4.	ईख				
5.	उल्लू				
6.	ऊन				
7.	एड़ी				
8.	ऐनक				
9.	ओखली				
10.	औरत				
11.	कबूतर				
12.	नाक				
13.	गधा				
14.	मगरमच्छ				
15.	चाकू				
16.	चम्मच				
17.	जीभ				
18.	राजा				
19.	टमाटर/टोपी				
20.	मटका				
21.	डमरू				
22.	घोड़ा				
23.	तरबूज				
24.	बतक				
25.	दरवाज़ा				
26.	बंदूक				
27.	नल				
28.	कान				
29.	पतंग				
30.	सिपाही				

Sl. No.	Stimulus Word	Subject's Responses			Accuracy of Response
		Repetition	Reading	Naming	
31.	बकरी				
32.	गुलाब				
33.	मुर्गी				
34.	कमल				
35.	यज्ञ				
36.	रुपया				
37.	रेडियो				
38.	खरगोश				
39.	लोमडी				
40.	फूल				
41.	नाव				
42.	तलवार				
43.	शरीफा				
44.	ब्रुश				
45.	सेब				
46.	पेन्सिल				
47.	हवाई जहाज				
48.	चूहा				
49.	गणेश				
50.	जहाज़				
51.	कॉफ़ी				
52.	अंगूर				

Maximum Score 10
Patient's Score———

SECTION I—C: Running Speech

Instructions: Read the following passage slowly and clearly. Ask the subject to repeat it after you. Late the subject to read the passage aloud. Use aspiration wherever necessary. Further, ask the patient to a the questions at the end of the passage. The questions must be asked orally. If the patient fails to an present the questions graphemically and ask the patient to respond verbally. If the patient fails to provide v responses ask the patient to answer by writing or by Gestural mode. Analyse the subject's performance on section in terms of his performance on section I–B. Also pay particular attention to clusters and take obs tional notes.

लाल किला दिल्ली का एक दर्शनीय एवं इतिहासिक किला है। यह केवल लाल पत्थर का बना है। उसके चारों ओर बगीचा है। जब इसके ऊपर इन्द्रधनुप के साथ घनघोर घटा छा जाता है तो इसकी सुन्दरता बढ़ती है। दूर दूर से लोग इसे देखने आते हैं। पंद्रह अगस्त को हमारे देश के प्रधानमन्त्री यहाँ झंडा फहराते हैं और भाषण देते हैं।

Sl. No.	Test Item	Stimulus		Response			Accura of Respo
		Verbal	Graphic	Verbal	Graphic	Gestural	
1.	लाल किला कहाँ है ?						
2.	यह किला किससे बना है ?						
3.	आजादी के बाद लाल किले का क्या महत्व है ?						
4.	इस किले को लाल किला क्यों कहा जाता है ?						

SECTION II : Syntax

Instructions : Instruct the subject that the following list of words and sentences contains both correct and incorrect forms. Ask the subject to listen carefully and indicate whether each item is correct or not. Illu trate with one or two examples if need be. Read the items in the list one by one. Repeat once if necessary. If the subject fails to respond; give him the test items in the written form. Accept correction once. Score for each accurate response in subsections A, B, C and D and 1 for each accurate response in subsections E, F, G, H, I, J and K. Make a note of the stimulus modality used, and also the modality in which the subject responds.

A. Morphophonemic Structures :

Sl. No.	Test Item	Stimulus Modality		Subject's Response			Accuracy of Response
		Verbal	Graphic	Verbal	Graphic	Gestural	
1·	विद्याभ्यास						
2·	अभी						
3·	उस्मी						
4·	महर्षि						
5·	स्वागत						
6·	कवी						
7·	जगतनाथ						
8·	सूर्य उदय						
9·	षडानन						
10·	सदाएव						
11·	उच्चारण						
12·	पिताम्बर						
13·	सदोपयोग						
14·	मनोनुकूल						
15·	दुर्बल						
16·	निरापराध						
17·	निर्गुण						
18·	प्रतिएक						
19·	महौषधि						
20·	चितानन्द						

Maximum Score 10
Patient's Score———

B. Plural Forms

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1.	लड़कियाँ						
2.	नदीयें						
3.	चप्पलाओं						
4.	कुर्सियाँ						
5.	पेड़ों						
6.	पानीयों						
7.	घड़ियाँ						
8.	किताबयाँ						
9.	मूँगफलें						
10.	बहनें						

Maximum Score 5
Patient's Score———

C. Tenses

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1.	मैं खाती हूँ ।						
2.	वह खेल रहा है ।						
3.	श्याम कल आया था ।						
4.	वह पिछले हफ्ते आयेगी ।						
5.	सीता शायद आज गाना गायेगी ।						
6.	मैं अगले महीने बंबई गया था ।						
7.	कमला कल आयी है ।						
8.	वे जा रहे थे ।						
9.	शंकर परसों आएगा ।						
10.	कल बच्चा रोता रहता है ।						

Maximum Score 5
Patient's Score———

D. PNG Markers

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1·	मैं चलता हूँ ।						
2·	तू पीता है ।						
3·	मैं ने रखा हो ।						
4·	तुम लिखती हो ।						
5·	मैं गायेगा ।						
6·	वह बोलेगा ।						
7·	हम नाटक देखते हैं ।						
8·	हम ने गायेंगी ।						
9·	सीता गाता है ।						
10·	हम ने चिट्ठियाँ लिखीं हैं ।						
11·	तू जाओगे ।						
12·	मैं जाती हैं ।						
13·	वह नाचनी है ।						
14·	हम आऊँगा ।						
15·	मैं चलूंगी ।						
16·	तुम ने दौड़ते हो ।						
17·	वे पढ़ते हो ।						
18·	मैं ने तस्वीर देखी थी ।						
19·	राम मारेगी ।						
20·	तुम पढ़ोगी ।						

Maximum Score 10
Patient's Score———

F. Case Markers

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1·	राम ने खाना खाया ।						
2·	सीता ने किताब देखा ।						
3·	मुझे किताब दे दो ।						
4·	मैं को पानी दो ।						
5·	उसने मुझसे एक किताब ली ।						
6·	वह दुकान को सामान खरीदा ।						
7·	यह राम का कलम/पेन है ।						
8·	पेड़ ने काटो ।						
9·	मैं ने घर थी ।						
10·	वह रेलगाड़ी से गया ।						

Maximum Score 10
Patient's Score———

F. Transitives, Intransitives and Causatives

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1.	लड़का पानी पीता है।						
2.	राम ने किया है।						
3.	लड़की दौड़ता है।						
4.	बच्ची नींद सोती है।						
5.	कुत्ते को भगाओ।						
6.	मैं तुम से गाना गाऊँगा।						
7.	वह बच्चों को सिखाती है।						
8.	हम आप से पाठ करवायेंगे।						
9.	राम श्याम से काम करेगा।						
10.	राधा बच्चे को सोती है।						

Maximum Score 10
Patient's Score———

G. Sentence Types

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1.	ये बंगलोर नहीं है।						
2.	वे अपने काम को हम ही देखते है।						
3.	तुम सिनेमा जायेंगे।						
4.	मैं ने उसको किताब दे दिया।						
5.	आप वह काम नहीं करना है।						
6.	हम गाने दो।						
7.	क्या आप हिन्दी जानते है ?						
8.	वह बंदर को देखकर हँसी।						
9.	वह काफ़ी पी।						
10.	चोर पुलिस से मारा गया।						

Maximum Score 10
Patient's Score———

II. Predicates

Sl. No.	Test Item	Stimulus Modality Verbal	Stimulus Modality Graphic	Subject's Response Verbal	Subject's Response Graphic	Subject's Response Gestural	Accuracy of Response
1.	ये मेरी किताब है।						
2.	ये कमीज कमला है।						
3.	तुम्हारा कमरा कौन है?						
4.	उनका कुत्ता बड़ा है।						
5.	वह कलम/पेन उस है।						
6.	उनका घोड़ा तेज से दौड़						
7.	जो कल गाना गायी, वह मेरी बहन है।						
8.	उनका घर कौन सा है?						
9.	वह साड़ी माँ की है।						
10.	यह मेरी बहन तस्वीर है।						

Maximum Score 10
Patient's Score— - —

I. Conjunctions, Comparatives and Quotatives

Sl. No.	Test Item	Stimulus Modality Verbal	Stimulus Modality Graphic	Subject's Response Verbal	Subject's Response Graphic	Subject's Response Gestural	Accuracy of Response
1.	राम और श्याम स्कूल गए।						
2.	मेरे भाई बच्चे आ गए।						
3.	जब राम और श्याम गए सीता लेके को भी गए।						
4.	पेन्सिल या लमक यो।						
5.	गिरीश सुरेश से छोटा है।						
6.	सुधा को सीता लम्बी है।						
7.	यह मकान सब मकानों पर बड़ा है।						
8.	मास्टर जी ने कहा कि वे पाठ पढ़ायेंगे।						
9.	गोपाल ने कहा कि शाम को बारिश आएगी।						
10.	राम ने कहा काम करवायेगा।						

Maximum Score 10
Patient's Sc re— - - -

J. Conditional Clauses

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1.	अगर तुम नहीं खाओगे तो पतले बन जाओगे ।						
2.	जब वह घर आएगा, तब मैं पैसे दूँगी ।						
3.	अगर आप कहेंगे, फिर भी वे काम करेंगें ।						
4.	यदि कमला समय पर न आती तो हमारी बस छूट जाती ।						
5.	जब श्याम आयेंगे, कल हम जायेंगे ।						
6.	अगर बारिश आयेगी हम घर में रहेंगे ।						
7.	अगर आज पैसे मिलेंगे तो हम शहर जायेंगे ।						
8.	हालांकि मैं ने उसको नहीं कहा फिर भी वह नहीं आया ।						
9.	अगर मैं उसको नहीं बुलाऊँगा तो वह आयेगा ।						
10.	यदि तुम मुझे ये चीजें दे सकते तो बहुत अच्छा होता ।						

Maximum Score 10
Patient's Score———

K. Participial Constructions

Sl. No.	Test Item	Stimulus Modality Verbal	Graphic	Subject's Response Verbal	Graphic	Gestural	Accuracy of Response
1.	एक मरा हुआ कुत्ता सड़क पर पड़ा था ।						
2.	खेती करने वाले किसान है ।						
3.	कपड़े धोना धोबी है ।						
4.	आगरा देखने वाली जगह है ।						
5.	गाने वाले लड़के कहाँ है ?						
6.	ये मेरा पढ़नेवाला स्कूल है ।						
7.	गांधी वाली फिल्म मुझे अच्छी लगी ।						
8.	चलते चलते वह थक गयी ।						
9.	बंबई जाने गाड़ी यही है ।						
10.	सांप को देखकर बच्चा भाग हुए अपनी माँ के पास गया ।						

Maximum Score 10
Patient's Score———

SECTION III : Semantics

SECTION III—A : Semantic Discrimination

Instructions : Ask the subject to point out to the colour, object and body part named. Name the items one by one. If he fails, give him the written words and ask him to match them with the corresponding items. Repeat item once if necessary. Accept correction once. Score 1 for each item identified correctly.

Sl. No.	Test Item	Subject's Response: Naming	Subject's Response: Matching	Accuracy of Response
	Colours			
1.	लाल			
2.	हरा			
3.	काला			
4.	पीला			
5.	नीला			
	Furniture			
1.	कुर्सी			
2.	मेज़			
3.	दरवाज़ा			
4.	दीपक			
5.	खिड़की			
	Body parts			
1.	नाक			
2.	जीभ			
3.	बायाँ हाथ			
4.	दायीं आँख			
5.	बायाँ कान			

	Maximum Score	Patient's Score
Colours	5	
Furniture	5	
Body Parts	5	

SECTION III—B: Semantic Expression

1. Naming

Instructions: Ask the subject to name the object presented. If he fails to do so check whether he can write the name, or explain its use through gestures. Score 1 for each correctly named (oral or written response) or for correct recognition of objects (as seen through gestural explanations). Accept mild paraphasias.

Sl. No	Test Item	Subject's Response			Accuracy of Response
		Phonic	Graphic	Gestural	
1.	पैसे				
2.	चाकू				
3.	मोमबत्ती				
4.	ताला				
5.	घड़ी				
6.	फूल				
7.	कन्घी				
8.	चम्मच				
9.	गेंद				
10.	गिलास				
11.	पैन्सिल				
12.	चाबी				
13.	किताब				
14.	आईना				
15.	डोरी				
16.	बियासलाई				
17.	कैंची				
18.	चूड़ी				
19.	पेन				
20.	थाली				

Maximum Score 20
Patient's Score———

2. Lexical Category

Instructions : Ask the subject to list the names of all the animals that he knows, for one minute. If he is unable to name them check whether he can write them. Give him an example or two if need be. Score 1 for each correctly named animal.

Maximum Score 15
Patient's Score———
Response Mode———

3. Synonymy

Instructions : Instruct the subject to match pairs with identical meaning in the following sets of words. Test items to be given verbally or graphically. Score 1 for each correctly matched pair.

Sl. No.	Test Items	Stimulus Verbal	Stimulus Graphic	Response Verbal	Response Graphic	Accuracy of Response
1.	राजा	1.	कारुणामय			
2.	दयालु	2.	गौरव			
3.	क्रोध	3.	तैर			
4.	मर्यादा	4.	नन्हा			
5.	छोटा	5.	बादशाह			
		6.	गुस्सा			

Maximum Score 5
Patient's Score———

4. Antonymy

Instructions : Instruct the subject to match the opposite pairs in the following sets of words given verbally or in writing. Score 1 for each correct pair.

Sl. No.	Test Items	Stimulus Verbal	Stimulus Graphic	Response Verbal	Response Graphic	Accuracy of Response
1.	सफेद	a.	बुरा			
2.	अच्छा	b.	नरम			
3.	अकलमन्द	c.	काला			
4.	कठोर	d.	कच्चा			
5.	छोटा	e.	बेवकूफ			
		f.	बड़ा			

5. Homonymy

Instructions : Ask the subject to give alternate meanings for the following words. Test Items may be given verbally or graphically. Score 1/2 each for all correct responses.

Sl. No.	Test Items	Stimulus		Response		Accuracy of Response
		Verbal	Graphic	Verbal	Graphic	
1.	हार					
2.	जल					
3.	सोना					
4.	मत					
5.	कर					

Maximum Score 5
Patient's Score———

6. Polar Questions

Instructions : Instruct the subject to answer the following questions with either 'yes' or 'no'. The questions may be given orally or in writing. Fill in the subject's name in the blank space in item number (2). Accept corrections only if the subject is very certain. Score 1 for each correct response.

Sl. No.	Test Item	Stimulus		Response			Accuracy of Response
		Verbal	Graphic	Verbal	Graphic	Gestural	
1.	क्या आपका नाम रामकृष्ण है ?						
2.	क्या आपका नाम ... है ?						
3.	क्या इस शहर का नाम दिल्ली है ?						
4.	क्या यह सिनेमा घर है ?						
5.	क्या इस कमरे वाला दरवाज़ा बन्द है ?						
6.	क्या पत्थर पानी में डूबता है ?						
7.	क्या सूर्य रात को दिखाई देता है ?						
8.	क्या आप केला छिलने से पहले खाते हैं ?						
9.	क्या शेर कुत्ते से बड़ा है ?						
10.	क्या पेड़ हथौड़ी से काटा जा सकता है ?						

Maximum Score 10
Patient's Score———

7. Semantic Anomaly

Instructions: Instruct the subject to indicate whether each of the following sentences is meaningful or not and explain why, if not meaningful. Test items to be given orally or in writing. Score 1 for each correct explanation.

Sl. No.	Test Item	Stimulus Modality: Verbal	Stimulus Modality: Graphic	Subject's Response: Verbal	Subject's Response: Graphic	Subject's Response: Gestural	Accuracy of Response
1.	मेरा बड़ा भाई मुझ से छोटा है।						
2.	रमेश मेरी बहन है।						
3.	कुर्सी तेजी से दौड़ती है।						
4.	आग ठंडी होती है।						
5.	सूर्य सुबह डूबता है।						

Maximum Score 5
Patient's Score———

8. Paradigmatic Relations

Instructions: Instruct the subject to explain the meaning of the following terms given verbally or graphically. Score 1 for each correct explanation.

Sl. No.	Test Item	Stimulus Modality: Verbal	Stimulus Modality: Graphic	Subject's Response: Verbal	Subject's Response: Graphic	Subject's Response: Gestural	Accuracy of Response
1.	सास–ससुर ; नानी .... (नाना)						
2.	बिण्डी–सब्जी ; अंगूर .... (फल)						
3.	तोता–चिड़िया ; शेर .. (जानवर)						
4.	लडका–लडकी ; दादा .... (वादी)						
5.	चावल–दाना ; चमेली .... (फूल)						

Maximum Score 5
Patient's Score———

9. Syntagmatic Relations

Instructions: Instruct the subject to fill in the missing Slot. Test items to be given verbally or graphically. Score 1 for each correct response.

Sl. No.	Test Item	Stimulus Modality: Verbal	Stimulus Modality: Graphic	Subject's Response: Verbal	Subject's Response: Graphic	Subject's Response: Gestural	Accuracy of Response
1.	बाल– काला, दूध .... (सफेद)						
2.	शेर– दहाड़, कुत्ता .... (भौंक)						
3.	चिड़िया– उड़, मछली .... (तैर)						
4.	चावल– खा, पानी .... (पी)						
5.	जनवरी– मास, गुरुवार .... (वार/दिन)						

Maximum Score 5
Patient's Score———

Subject Proforma—Linguistic Profile Test

Section	Possible Total Score	Subject's Score* Stimulus Verbal	Stimulus Graphic	Response Verbal	Response Graphic	Response Gestural	Total Scores on Sections
Section I (Phonology)							
A. Phonemic Discrimination	48						
B. Phonetic Expression	52						
Section II (Syntax)							
A. Morphophonemic Structures	10						
B. Plural Forms	5						
C. Tenses	5						
D. PNG Markers	10						
E. Case Markers	10						
F. Transitives, Intransitives and Causatives	10						
G. Sentence Types	10						
H. Predicates	10						
I. Conjunctives, Comparatives and Quotatives	10						
J. Conditional Clauses	10						
K. Participial Constructions	10						
Section III (Semantics)							
A. Semantic Discrimination							
1. Colours	5						
2. Furniture	5						
3. Body Parts	5						
B. Semantic Expression							
1. Naming	20						
2. Lexical Category	15						
3. Synonymy	5						
4. Antonymy	5						
5. Homonymy	5						
6. Polar Questions	10						
7. Semantic Anomaly	5						
8. Paradigmatic Relations	5						
9. Syntagmatic Relations	5						
10. Semantic Contiguity	5						
11. Semantic Similarity	5						
Grand Total	300						

*Verbal—Blue Graphic—Green Gestural—Red

10. Semantic Contiguity

Instructions : Instruct the subject to match and explain the relationship between the following groups of words given verbally or graphically. Score 1 for every correct pairing.

Sl. No.	Test Item	Stimulus Verbal	Stimulus Graphic	Response Verbal	Response Graphic	Accuracy of Response
1.	मक्खन	a.	रोटी			
2.	रूई	b.	बाल			
3.	गेहूँ	c.	मटका			
4.	मिट्टी	d.	पौधा			
5.	बीज	e.	घी			
		f.	कपड़ा			

Maximum Score 5
Patient's Score— - —

11. Semantic Similarity

Instructions : Instruct the subject to match and explain the relationship between the following groups of words given verbally or graphically. Score 1 each for every correct pairing.

Sl. No.	Test Items	Stimulus Verbal	Stimulus Graphic	Response Verbal	Response Graphic	Accuracy of Response
1.	खेलो	a.	पाठ			
2.	पढ़ो	b.	गाना			
3.	गाओ	c.	दौड़			
4.	देखो	d.	खाना			
5.	खाओ	e.	खेल			
		f.	दृश्य			

Maximum Score 5
Patient's Score— — —

Appendix

SECTION I : Phonology

SECTION I—A : Phonemic Discrimination

Instructions : Place the pictures representing each minimal pair in front of the subject. Read aloud the words of the minimal pair (one after another) and ask the subject to point out to the appropriate picture. If the subject fails to do so give him the written forms of the minimal word pair and ask him to match them with the appropriate pictures. Score 1 for each correctly identified picture. Allow correction once only, if the subject is very certain his earlier response was wrong. Repeat once if required.

Sl. No.	Minimal Pair	Stimulus		Response		Accuracy of Response
		Verbal	Graphic	Verbal	Graphic	
1.	मूली–माली					
2.	किला–केला					
3.	मोर–मार					
4.	लड़की–लड़का					
5.	खेल–खोल					
6	भाला–भालू					
7.	कोयल–कोयला					
8.	पेटा–बेटा					
9.	पैर–तैर					
10.	धब्बा–डब्बा					
11.	जाल–गाल					
12.	नाप–बाप					
13.	पान–बाण					
14.	नस–नल					
15.	सेर–शेर					
16.	डंडा–ठंडा					
17.	माल–मार					
18.	कार–काट					
19.	जग–यज्ञ					
20.	गाय–गाँव					
21.	पता–पत्ता					
22.	चिट्ठी–चींटी					
23.	चक्की–चक्र					
24.	माता–माथा					

Maximum Score 48
Patient's Score———