A STUDY 0F ECHOLALIA

IN KANNADA SPEAKING AUTISTIC CHILDREN

Snehalatha
REG. No.M9422

DISSERTATION SUBMITTED AS PART FULFILLMENT OF FiNALYEAR M.Sc. (SPEECH AND HEARING) TO THE UNIVERSITY OF MYSORE. MYSORE

ALL INDIA INSTITUTE OF SPEECH AND HEARING
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MY PARENTS

AND

MY FAMILY MEMBERS

CERTIFICATE

This is to certify that this Dissertation entitled : "A STUDY OF ECHOLALIA IN KANNADA SPEAKING AUTISTIC CHILDREN", is the bonafide work inpart fulfillment for the Final Yer M.Sc. (Speech and Hearing) of the student with Reg.No. M9422.

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CERTIFICATE

This is to certify that the Dissertation entitled : "A STUDY OF ECHOLALIA IN KANNADA SPEAKING AUTISTIC CHILDREN", has been prepared under my supervision and guidance.

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DECLARATION

I hereby declare that this Dissertation entitled : "A STUDY OF ECHOLALIA IN KANNADA SPEAKING AUTISTIC CHILDREN", is the result of my own study under the guidance of Dr. Shyamala Chengappa, Lecturer in the Department of Speech Pathology, All India Institute of Speech and Hearing, Mysore and has not been submitted earlier at any University for an yother Diploma or Degree.

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INTRODUCTION

She is just like a parrot. She will **say** any word in **this world,** just to say it, but it means nothing to her. if I say, "Betty, go and sit down like a good girl", she will say, "Betty, go **and** sit **down like a** good **girl", and she** will do it, but she will sayit also.

Mother of an autistic child describes her speech in these words.

Autism is a severe form of psychopathology in childhood. It has specific behaviour manifestations that appear early in life specifically within two-and-a-half to three years.

"It is one of the most common psychoneurological problems of childhood".

It is a syndrome of childhood characterized by a lack of social relationship, lack of communication abilities, persistent compulsive rituals and resistance to change.

The behavioural characteristics and the syndrome of autism was first described by LEO KANNER in 1943. He described a combination of factors as characteristics of an autistic child. He studied 11 children initially who showed several features such as extreme aloofness, stereotypic motor physical movement which was highly repetitive, an

obsessive desire for sameness in the environment, delay and disturbances in language development, but often speech showing echolalia and parrot like repetition. He also noticed that, these children have good and normal physical appearance and all of them showed abnormalities in infant behaviours like facial responsiveness, no eye contact, absence of play behaviour and they tend to ignore attempts of hugging.

One can find very conspicuous delay in the onset of speech which is initially seen as mutism in those children, later few of them gradually tend to develop speech which may/may not be functional. Speech that develops may show abnormalities voice articulation and prosody, pronominal reversal, a typical vocabulary development, morphosyntactic and pragmatic errors. The most important and generally seen feature is echolalia which refers to repetition of heard speech. It could be mainly of two types.

Immediate echolalia is repetition of just heard speech.

Delayed Echolalia - refers to utterances repeated at a significantly later time.

Another variety of echolalia may be present i.e.

Mitigated Echolalia : (Fay, 1980). She found that most of the children repeated the heard speech with some alteration, modification. This is seen in the higher functioning autistic child and is much more advanced than immediate/delayed echolalia. This condition is seen when the child is getting his speech more and more under voluntary control.

The presence of echolalia is general is felt to be a good prognostic indicates with the view that echolalia can be later therapeutically modified into meaningful conversations. The echolalia in autistic is said to be mainly due to comprehension deficit. Because they fail to comprehend what is asked hence they repeat what is asked; other wise they would try to answer appropriately. It could also be serving as self-stimulatory kind of behaviour as they derive pleasure out of it and they keep repeating it. Language impairment is considered to be control to autism and varieties of echolalia are said to be typical of the syndrome.

This study was conducted with the aim of studying speech and language characteristics and echolalia behaviour in autistic children.

Need for study

Echolalia has been reported to be a significant variable in the language of the autistic children. It has been widely studied in the English speaking autistic population. Only one study on Malayalam speaking autistic children has been conducted so far in the Indian context. Indian studies one echolalia of the disordered population as autistic are nil barring one conducted by Asha (1995) in Malayalam. Hence, a study on Kannada speaking autistic children was taken upto study the echolalic behaviour along with other speech and language characteristics. Such a study is hoped to augment the present understanding of verbal behaviour of autistic children.

REVIEW OF LITERATURE

Childhood autism is defined in the DSM-III (American Psychiatric Association, 1980) as a pervasive developmental disorder. This means that it is characterized by distortions in the timing, rate, and sequences of many psychological functions involved in the development of areas such as social skills and language. More over, autistic children display severe qualitative abnormalities which are not normal for any period of development. The essential symptoms of childhood autism are a lack of responsiveness to other people, disturbances of developmental rate and a sequences, disturbances of responsiveness capacities and further all signs and symptoms must be present prior to 30 months of age (Rutter, 1978 a, Shopler, 1978).

GENERAL CHARACTRISTICS

Primary autism is identified by behavioural manifestations which can be grouped under the following categories.

(1) Deficit or impairment in social behaviour.
(2) Impairment of speech and language
(3) Insistence or demand for "semeness" in the environment

(4) Disturbances of sensory input.

(5) Disturbances of motality.

RUTTER (1978)

(1) **Impairment of social behaviour**

These children are found to be significantly impaired informing social relationships. Kanner (1943) suggested that all other symptoms occurred because of this profound social withdrawal. Several studies by (Wolf and Chers, 1964; Hutt and Vaizey, 1966; Wing, 1969; Churchill and Bryson, 1972; Bartak et al. 1975) have shown that autistic children's social development has a number of rather distinctive features.

They do not show any attachment to people or human relationship, be it mother, father or any other members of the family. This failure to develop and maintain social relationships or interpersonal relationships can be evidenced through several behaviours such as -

(i) Lack of eye contact : These children appear to be in a hard shell difficult to reach. They ignore people in the environment as though they don't exist.

(ii) They also have a characteristic vacant starring. There is no emotion in their visual contact. They avoid looking at people viz. seen as reflecting the basic in ability to form social relationship.

(iii) In terms of emotional reactions they may range from giggling to hysterical laughter or they may start crying which may extent to inconsolable sobbing.

(iv) They also show abnormal irrational fears.

(v) They are basically loners, they lack in response to hugging and cuddling. They do not derive pleasure out of it. They would frequently indulge themselves in playing alone. They fail to indulge incooperative or interactional play.

All these are in contrast to their attachment to objects.

(2) **Inpairment of speech and language**

Majority of the autistic children have a delay in speech and language development and about 50% of them remains mute. Even if language does develop, it is

characterized as rigid and stereo typed being marked by echolalia, atypical vocabulary, pronominal reversals etc.

(3) **Demand for 'sameness'**

These children are highly sensitive to arrangements of things, furnitures etc. in the environment. They show obsessive interest in certain activities or toys. Thus, the children may endlessly line up toys or make patterns of household objects or collect curious objects such as ten etc. of a special shape 2nd there may be intense attachment to these objects,so that the children have to carry around with them always. Usually these attachment persists in spite of extreme distortions in the size or shape of the object, so that the function of the object is irrelevant to the attachment (Merchant et al.1974). The attachment is to a specific objects and the children protest if it is removed. Third, especially in middle childhood and later many autistic children have unusual preoccupations which they follow to the exclusion of other activities. Forth, ritualistic and compulsive phenomena are very common. Fifth, there is sometime a marked resistance to changes in the environment so that child becomes extremely distressed if furnitures in the house is moved or if the ornaments are changed.

(4) Disturbance of sensory input

Many of the autistic children are very frequently mistaken for being deaf or blind because of their lack of response to auditory or visual stimuli. Generally you could see hyposensitivity where the loudest of sound may not evoke any response from the child. There could also be hyper/over sensitivity to the auditory or visual stimuli which is highly selective in nature. e.g. certain children may not respond to very loud sounds like vehicle horn, but may respond to very soft sound like reissells of paper, buzzing of bee etc. and they may become very irritable to screaming.

Similarly, they may appear blind to the extend that they ignore people approaching cars and buses. At the same time may be very sensitive to smallest stimuli as ants crawl.

There could also be stimulus over selectivity where there is a research has demonstrated that autistic children rarely show behaviour indicative of shared attention and inter subjectivity.

Kanner (1943) initially recognized a social and emotional deficit in autism and proposed that autistic individual "have come into the world with innate in ability to form the usual, biologically provided affective contact with people". Autistic children tend to smile less often and lack the coy or self conscious affect expressed by other children in studies employing the self recognition paradigm (Dawson and McKissick, 1984).

Yirmiya. Sigman and Mundy (1989) suggested that individuals display fewer facial and gestural expression of emotion especially expression of positive affect. The expression of autistic children are idiosyncratic and therefore less readable by other individuals.

Several authors (DeMyer et al. 1972; Rutter, 1978; Hammer and Langdell, 1981) reported an impaired developed in social imitation in autistic which may be related to their deficient use of symbolic play and social communication. They also have inability to engage in interactive or cooperative play where there is mutual turn taking from very early infancy. Prelinguistic behaviour such as pointing, showing or taking turn are normally not present (Bertak and Rutter, 1975).

In short, individuals with autism from profound disturbances in their ability to imitate and maintain social interaction narrow limited aspects of the available information gaining a heightened reaction.

(5) **Disturbance in motility**

They are usually normal in their motor development. They show normality in movement and postures which do not have anything to do with neurological or physical abnormality. They may show gross motor movements like jumping, rocking, clapping hands and whisling. There may be stereotyped, repetitive motor movements involving fingers, hands, legs. At a more subtle or finger level you could see stereotyped persistent and repetitive movements like rocking of the eyes, twickling of the finger etc. They may have lateral gaze or there could be gazing of fingers movements or they are so fascinated by the spinning of the blades of the fan. These stereotyped movements could be classified under "self-stimulatory behaviour". This self-stimulatory or stereotypic fonding of objects becomes even more noticeable later. Such type of self-stimulatory behaviour will also include stereotyped vocalizations. They hold to certain grunts in terms of pieces of rhyme and they keep repeating it all the time. There could be scratching and

tapping behaviour. "Self injurious behaviour" could also be present in these children. It could range from head banging, to self-slapping finger biting, nail biting etc.

Some investigators feel this behaviour may also occur as an attention getting device or even as a form of self stimulation.

The self-stimulatory behaviour and self injurious behaviour vary across the autistic children from time to time.

ASSESSMENT AND DIAGNOSIS

The very nature of the autistic child, who by definition is limited in attention, response and interest in language and communication, presents formidable obstacles to any diagnostician. DSM-III have to be manifest before the age of 3 years in order to diagnose it primarily based on behaviour.

Assessment and rehabilitation is a team work with paediatrician, neuropaediatrician, psychiatrist, psychologist and speech and language pathologist. Each

infant has to be assessed on the basis of the history. Physical and developmental examination.

Behavioural Assessment - Behaviour components are identified by parental reports, direct observation and behaviour checklist :

The history defines the parental concern about the child, it delineates how the child differs from the siblings or other children of comparable age. It gives valuable information about child's development, his social interaction, communication play interest, daily habits and lay control.

A behaviour rating instrument for evaluating autistic children - BRAIC (Ruttenberg and Wolf, 1967) is found useful in the areas of relationship, communication, vocalization and expressive speech.

This profile can be used to compare children to measure change and to suggest the next level of stimulation required. A few other assessment tools being currently used include :

(1) Autism screening instrument for educational planning (Krug et al. 1980).

(2) Individual assessment and treatment for autistic and developmental disabled children or psychoeducational profile (Schopler and Reichler, 1979).

(3) Autism checklist (Anita).

Psychometric assessment - These tests reveal function of perception, cognition and speech. Tests of early normal development assess locomotor development, personal social adjustment, hearing and speech, hand and eye co-ordination and performance.

Alpern (1967) used a modified infant test for young autistic because of the low social and cognitive levels and extreme attentional disorders.

Assessment of communication - A clear description of communicative means and combination of means is the primary structural data that will be used in identifying acts that may function communicatively or cognitively for a child. The actual signals used by the child should be described as to whether they are non-verbal (gestures, gaze) verbal (use of words, signs or vocal). Furthermore, any combination of

verbal act or gestural acts should be identified. Specific information should also be included as to the complexity and content of verbal acts, the quality and nature of vocalizations (vowel like vocalization, consonant like vocalization and types of gestures (pointing, extending object from body etc.).

Tests like Illinois Test for Psycholinguistic Abilities (ITPA) and Peabody Picture Vocabulary Test (PPVT) are used to assess the verbal skills.

DIAGNOSIS : In International Collaboration, experts have agreed the use of certain behavioural criteria for diagnosis of Autism. The most detailed and most recent scheme is the one described in DSM III-R) of the American Psychiatric Association. A very similar diagnostic schemes available in the International Classification of Disease (ICD-10) issued by the World Health Organization.

The essential criteria are specified on - Qualitative impairment inneciprocal social intervention.

SPEECH AND LANGUAGE CHARACTERISTICS

Autistic children characteristically show problems in speech and language development. Speech may be present, but it is not used for communication, only about 50% of the autistic children develop speech and even these show the typical problems of echolalia, pronominal reversals, etc. (Maria, and Paluszny, 1979).

All the specific problems related to the speech and language of autism are formulated by Rutter and Schopler (1987) update is as follows:

(1) Delay or total lack of the development of spoken language.

(2) Failure to respond to the communication of others.

(3) Relative failure to imitate or sustain conversational interchange.

(4) Stereo typed and repetitive use of language.

(5) Use of 'you' when'I' is meant.

(6) Idiosyncratic use of words.

(7) Abnormalities of prosody.

(8) Semantic or conceptual difficulties.

(9) Abnormalities of non-verbal communication.

ASPECTS OF SPEECH

(1) Muteness and delay of spoken language

Achieving full control of the mechanics of speech production is not precluded by autism. How is it than that a large proportion of autistic children never speak at all? The proportion of non-speaking children has not yet been reliably estimated, but arccent candetian study showed that the incidence is strongly related to the present of severe mental handicap (Bryson, Clark and Smith, 1988).

Muteness or mutism include a range of behaviour from, total silence to the emission of in articulate vocalization bearing little resemblance to human speech.

If the autistic child hears, does he babble? Rutter, Bartak and Newman (1971) in a study of autistic children noted that the parents reported either diminition in amount or deviation in the quality of babble in about half of this group. Ricks (1975) reported that parents he interviewed recalled no normal conversational babble in their autistic childrens Ist year. However, Ricks did record vocalizations of some babble in autistic children after 3 to 5 years. He observed that their babble was monotonous some what similar

to a normal child falling asleep. He also found that, whereas normal babies and preverbal babies with Downs syndrome (age 3 - 6 years) paid little attention to their own babble recorded and played back to them, autistic children behaved differently. If the autistic child reported, he did so by precisely imitating his own vocalizations. However the ignored recordings of any other autistic children and taped imitation of their own babble made by normal child.

Hewitt (1965), Lawaas et al. (1971) stressed the fact that muteness is a prominent characteristic of autism.

Sedlackova and Nesmidalova (1978) reported that in two thirds of the autistic children investigated, speech developed late, the first words being uttered between the age of 2 and 5 years and first sentence between 2 and 6 year.

(2) Articulation

The most striking features is the relative high quality of articulation as contrasted with other verbal abilities. But some of these children do make articulation errors. However, as a group, they do not seem to deviate markedly

from the developmental patterns of the non-autistic. In their study on the development of autistic children with special regard to their means of verbal expression, Sedlackovaries and Nernidalova (1975). reported the following :

Disorder of articulation manifested more markedly at an early age than in adolescence, but it is never regular and systematic. On the other hand, some children articulate very precisely even to the point of exaggerates.

In some cases, dyslalia i.e. disorders in articulation connected with the development of distinctive features is observed such as those found in the development of speech sounds and cannot be explained from a developmental point of view and thus, quite illogical are also observed. For instance there is a striking emphasis on some phonological features. Various modifications and deformations of speech sounds, increased nasality in unusual places, unusual substitution of sounds, bizarre articulation mechanism etc.

(3) **Voice Quality and Intonation**

The voice quality of the autistic child has been recognized as bizzarre.

One frequently noted verbal characteristics is that of consistent high pitch, often described as "bird like". Detailed investigation (Goldtarb, Braunstein and Lorge, 1956; Pronorost, Wakstein, 1966) have reported extensively high pitch level; with insufficient pitch changes. Pronorost and colleagues analyzed a childs vocalization and noted a high pitched fundamental frequency of 1,500 Hz.

Other vocal idea syncracies that have been noted include hoarseness, harshness and hypernasality (Pronorost et al. 1966). Again it has been noted that loudness levels fluctuate as reflected by whispering, muttering and occasional level ejuculations (Goldfarls et al. 1956).

Among the intonational peculiarities attributable to autism monotony seem to be most widely recognized. The literature abounds with such description as "mechanical" "hollow", "dull" "wooden" arythmic" and so on. In apparent contrast to this large group are these who reportedly speak in a singing manner. These more melodic children may these to whom musical abilities are often attributed.

ASPECTS OF LANGUAGE

Not only are autistic children usually markedly delayed in their acquisition of speech, but also their pattern of language development and their usage of language in strikingly different, both from normal children and from children with other language disorders (Rutter, 1965, 1966; Ricks, 1975, Ricks and Wing, 1975; Bartak, et al. 1975)

Kanner (1943) systematically studied 11 autistic children, he observed variety of behavioural features which seemed both to be characteristic of all eleven children and also to differentiate them from children with other psychiatric disorders. These features included :

- an delay in speech acquisition,
- delayed echolalia,
- the non-communicative use of speech after it develops,
- pronominal reversal,
- repetitive and stereotyped play activities,
- a lack of imagination.

Kanner (1943) also noted that autistic children who did verbalize did so often without any comprehension of what they were saying.

DeMyer (1976) noted that, in terms of the language disorder, autistic childrens performance have been shown to

be inferior to those of non-autistic retarded children on tasks of verbal memory and word repetition. In addition to the aforementional differences in language development. Between the MR youngsters, other studies have shown difference between groups in areas such as memory processing, categorization, abstraction and concept use with autistic children showing consistent deficits often not shared by their mentally retarded peers (Hermelin and O'Conner, 1976).

Ricks and Wing (1975) and Hermelin (1978) hypothesized that autism might be attributable to a more control symbolic- capacity deficit. A wide range of cognitive functions have been investigated through both experimental (Hermelin and O'Conner, 1970; Hermelin, 1976) and clinical studies (Rutter, 1974). From these various studies, following conclusions were drawn:

(i) The defect in autism is certainly not just an abnormality of speech. Rather it involves a wide range of language and language related functions which include impairment in verbal understanding, sequencing and abstraction.

(ii) It is certainly not just a question of a defect in language output. Autistic children also have a serious impairment in the understanding of language, in that use of symbols in play, and in their use of meaning in memory processors.

(iii) The difficulties extend beyond spoken language are also improved in their use of understanding of gestures and of written language. Bartak et al. (1975) study demonstrated the same finding.

(iv) Autistic childrens problem in temporal sequencing are much worse than these in spatial frequency (Hermelin, 1976).

(v) Although the disabilities are not entirely confined to any one sensory modality, the associations tend to be with auditory rather than visual functions.

(vi) Visuo-spatial perceptual defects do not play any essential role in the development of infantile autism.

(1) Pronoun difficulties

It has been reported that autistic children persistently make pronominal errors (i.e. me used to refer to the addressee and you is used to refer to the child).

Pronouns are members of a syntactic clars that is acquired relativity late. The 'I' and me distinction is often not made correctly even by normal adults in terms of the standard grammar of adult speaker. In autistic children's language too, all these problems ar present, but there is the belief that if personal pronouns 'I' and 'you' or 'your' and 'my' are confused by autistic children, than this must have personal significance. There might be quite literally a confusion of self and other.

Bartak and Rutter (1974) showed that reversals can often be explained as a consequence of echolalia. As reviewed by Jordan (1982) autistic childrens difficulty with pronouns is not the same as a tendency to reverse first and second person pronouns. In particular, autistic children do not show a confusion of the identity of the person to whom the pronouns refer.

In Landry and Loreland's (1988) study of communication behaviours a correlation was found between correct pronoun use and degree of joint attention behaviour. Thus pronoun use improves when reciprocal social interactions improve. This relationship suggests that autistic children's

difficulties on pronoun use are not specific but have the same root as their other difficulties in social interaction.

Morphosyntactic and pragmatic errors

Bartak, Rutter and Cox (1975) and Cantwell, Baker and Rutter (1978) reported from their important investigation of high ability autistic children and language distorted, non-autistic children that there was relatively high competence on morphological rules and on a wide range of sentence types. The understanding of active and passive sentences (Paul, Dykens, Leckman, Watson, Breg and Cohen, 1987), the comprehension and production of many different grammatical forms including word-order past time and negation (Tager, Flurberg, 1989) are all with the capacity of the autistic children.

Investigation of fluent autistic (Frith and Snowling, 1983) have shown that autistic children tended to substitute a missing word of the correct syntactic class rather than of the wrong class.

Tager-flurberg (1981) was able to show that autistic children were less influenced by high probabilities of

events which are normally taken into account when we listen to speech and workout its content. For ex. It is easy to understand that "the girl is holding the baby" but hard to understand that 'the baby is holding the girl'. This difference in case of comprehension was less pronounced in autistic children.

Kanner (1946), Tubbs (1966) and Prior (1977) have reported that autistic children have considerable difficulty in identifying word combination i.e. in comprehending relationship between agents, action, and objects, McNeil (1966) has reported that at the telegraphic stage, the most frequent sentence patterns are verb-noun, and verb noun-noun from which subjects be missing.

Several researchers (Ball, 19781; Balpare and Simmons, 1983) reported deficits in the use of rules for dyadic conversation the management of topic comment relations and the use of other rules for governing the speaker hearer relationship. Pilot studies of conversational skills on autistic individual (Paul and Feldman, 1984) suggested that one aspect of the pragmatic difficulties seen in autistic individuals is an inability to infer what information the interlocutor has in mind.

Most verbal autistic don't demonstrate, usage of language to satisfy their needs (instrumental functions) to exert control over the behavior of others (regulatory function) or to share information with a communication partner (informative functions). They also show difficulties in understanding of relations and activities, while the substantive and denominative functions appear to be better developed.

From the wide ranging of studies reviewed by Tagar-Flurberg 1989 on production and reception of grammer, obtain a consistent answer; far from being specific problem area, grammer and phonology can be remarkably intact in autistic children, possibly representing is lets of ability.

ECHOLALIA IN NORMAL LANGUAGE DEVELOPMENT

Echolalia, or the apparently non-communicative repetition of a word or utterance spoken by another person, is a common phenomenon in normal language development. Some childrens may produce words echolatically from 9 or 10 months onwords, often before they show clear understanding of their meaning. Later, between the age of 2 and 3 years, when phrase speech is developing, many children go through a age when they frequently echo the last few words of whatever

is said to them. Upto 40% of children's utterances at this age may be exact or partial echoes of hard phrases (Fay, 1967). However, the nature and frequency of echoing varies considerably from child to child and some imitate very rarely (Bloom et al. 1975), Nelson, 1973; Rames, 1976). Echolalia is also affected by the presence of certain contextual variables. It is more common, for example, following stimuli such as locative "wh' questions or utterances which are beyond the childs level of comprehension (Fay, 1980).

Initially, many authors, such as Ervin-Tripp (1964), Fay (1967), Fay and Butler (1988) and Myklebust (1957), tended to view echolalia predominantly as a function of the child's poor understanding of language and as having little or no constructive role in language acquisition.

ECHOLALIA IN AUTISM

Echolalia in normal children is relatively short-lived, and by the age of two and a half to three ears has usually disappeared (Van Riper, 1954; Slobin, 1963; Nakanishi and Owada, 1973).

More prolonged echolalia is almost always associated with some form of language retardation. It is often marked, for example, in the speech of mentally handicapped, autistic and dysphasic children, all of whom show varying degree of language delay (Baltaxe and Simmons, 1975; Fay, 1980, Schuler, 1979).

Non-communicative echolalia is particularly striking in the speech of autistic children. Kanner (1946) considered echolalia, or meaningless repetition of speech, to be one of the major identifying feature of autism.

Rutter (1966) found that echolalia was the most common abnormality in the speech of verbal autistic children.

Bartak, Rutter and Cox (1975) found a history echolalic behaviour in all 19 (100%) of their autistic subjects who had acquired speech.

Baltam and Simmons (1981) estimated that a minimum of 75% of autistic individuals who speak are echolalic or had been echolalic for extended periods in development.

For along time the lack of spontaneous speech has been a familiar complaint about autistic children's language

(Shapiro, Fish and Crinsberg, 1972; Ricks and Wings, 1976). Instead of spontaneous speech we find the use of stock speech about a few narrow topics only. What we mean by spontaneous speech is the knack to say the right thing at the right moment - even if its stereotypical phrases (e.g. I love you) what we want to hear from an autistic child and so rarely receive is something that requires the ability to guess and anticipate what the listener might wish to hear at that precise moment. For this reason lack of spontaneous speech is not cured by turning taciturn individuals into Chatter Box. Instead non-verbal responses such as an occasional smile would be better than speech that sounds as if rehearsed. of course, nobody has yet come up with a programme that could teach either verbal or nonverbal spontaneous communication of the kind that is so sadly missing in autistic people.

Echolalia has been much researched topic in autism and justifiably so. Schuller and Prizant (1985) concluded that echolalia is the net result of limited communicative competence and normal speech skills. In this sense the echoing is to be seen as accidental behaviour which should not be imbued falsely with communicative relevance.

McEvoy, Loveland and Landry (1988) have shown that the communicative value of echolalia is extremely limited. They draw attention to the fact that echolalia has not yet been investigated longitudinally, but suggest that one may continue to assume that the more generative language a child possesses, the less he or she will use, echoed speech. So called formulate speech often involves speech fragments which are outside the childs possesses, the less he or she will use, echoed speech. So called formulaic speech often involves speech fragments which are outside the childs generative language system and which are used 'lock, stock and barrel even when only marginally appropriates to the context'.

Unfortunately, the explanation of repetitive behaviour in autism is still a large uncharted area. In any case we cannot explain this phenomenon in terms of fault in second order representation. an attempt has been made to explain repetitive behaviour in relation to the cognitive processes that are involved in meta representation (Frith, 1989).

Indian studies

Asha (1995) studied the echolalic pattern in Malayalam speaking autistic children. Seven autistic children were

chosen, aged 4 to 12 years to explore their echolalic behaviour. Out of them 2 were females and 5 were males. They were also expose to another non-cognate language that is English. Data was collected where their utterances were tape recorder and a diary was maintained, these recorded responses were transcribed in I.P.A. This data was further qualitatively and quantitatively analyzed, where various features likes speech characteristics, linguistic characteristics and other paralinguistic characteristics etc. were analyzed. Based on the analysis following results were drawn -

- Subjects had better comprehension than expression.
- Some of them showed vocal and prosodic abnormalitity.
- The nature of echolalia varied across the seven children.
- They had loud echoes where prompting was needed.
- Reduce echolalia was noticed in a few subjects
- Usage of pronouns and dietetics was affected in spontaneous utterances, but not in echolalic utterances.
- Turn taking and affirmation were present in these subjects.

Based on these results obtained, she concluded that autistic children show immediate echolalic utterances along with other speech abnormalities.

Shayamala (1989) conducted a study on verbal stereotypes in autism. She found stereotyped abnormalities of voice and articulation, lack of pronominal usage, echolalia and lack of spontaneous speech.

Two general categories of echolalia have been identified in the language of autistic individuals.

1) Immediate echolalia
2) Delayed Echolalia

(1)**IMMEDIATE ECHOLALIA** : Refers to repetitions that are produced either following immediately or a brief time after the production of a model utterance.

(2) **DELAYED ECHOLALIA** : Refers to utterances repeated at a significantly later time.

Mitigated echolalia : (Fay, 1980) She found that most of the children repeated the heard speech with some alteration/modification. This is seen in the higher functioning autistic child and is much more advanced than immediate/delayed echolalia. This condition is seen when the child is getting his speech more and more under voluntary control.

Echolalic behaviours both immediate and delayed, are best described as a continuation of behaviours in regard to exactness of repetition, degree of comprehension, and underlying communicative intent (Prizant, 1983 and Schuler, 1979) . The decision as to whether an utterance mayor may not be called echolalia depends on once the theoretical orientation and involves a judgement which has to be based on criteria that are somewhat arbitrary in nature.

Immediate echolalia has received the greater amount of attention from researchers, probably because its easily identified. Research on immediate echolalia has focused on structural linguistic considerations as well as functional issues. Some researchers have considered it, to be a meaningless parroting that secures no apparent purpose (Lovas, 1977; Schneibanan and Carr, 1978). Whereas others have discussed immediate echolalia as a primitive attempt to maintain social contact when an individual is confronted with language beyond his/her linguistic competence (Fay, 1973, Shapiro, 1977).

Prizant and Duchan (1981) conducted the first systematic study which attempted to discover specific functions of immediate echolalia by analyzing the utterances of four highly echolalic autistic children; seven functional

categories of immediate echoalia were derived based on videotape analysis of 1,009 utterances produced by the children in interactions with familiar adult in schools and at home during an eight month period. Segmental, suprasegmental, non-verbal, and situational features. The children in the study produced echoic utterances which were interactive as well as non-interactive and which were produced with and without evidence of comprehension. The specific functional categories derived included non-focused, turn taking, declarative, yes-answer, request, rehearsal and self-regulatory.

Buim and Stuecher (1974) analyzed the echolalia of 5 1/2 year old boy having a diagnosis of childhood psychosis with autistic features. Sixteen sentences of varying complexities were presented to the boy, and he return each in immediate echolalia. According to the analysis, the meaning of eight of the sentences was retained four of these were exact echoes ("today I play outside"/ "today I play outside"). Three were truncated are reduced echoes ("I might have been playing" / "I playing"). The remaining examples was an contraction ("It is very nice / it's very nice").

Echolalia rarely occurs in conjunction with message comprehended (Fay, 1967, 1969; Fay and Butter, 1968). although understanding of individual components of the triggering stimulus maybe demonstrated, the message has failed to register if the echo is forthcoming. Therefore, an echoers capabilities to process languages may be more likely revealed by the stimuli he does not echo.

Delayed echoalia, which has been defined as echoing of a phrase after some delay or lapse of time (Simmon, 1975) or as unrestructured old forms used in new situations (Shapiro, 1977) has received considerably less attention from researchers.

Delayed echolalia is the repetition stored, usually echoic utterances in new and usually inappropriate contexts. Griffith and Rituo (1967) reported a dialogue with a 9 year old in which most of her apparently spontaneous comments were infact almost verbatim reproductions of remarks she had made days, weeks or months previously. Such behaviour is typical of children with childhood autism; childhood schizophrenia.

Shapiro, Roberts and Fish (1970) gave e.g. of a child who responded to his mother's farewell by saying good bye 5

min. after her departure. But by the time a new observer did not recognize the relevance of the childs remark and the mother had left her "unresponsive" child.

Lovaas, Varni, Kolgel and Lorsch(1977) collected utterances from three autistic children who had frequently produced "self-stimulatory" delayed echolalia. The researchers, arguing within an operant framework, claimed that their subjects delayed echolalia was under control of intrinsic rather than extrinsic reinforcement.

Classic e.g. was given by Kanner (1946) - as cited by Fay in his subject who said, "Don't throw the dog off the balcony" to check himself from doing something wrong. This was traced back to the time when his mother said the phrase with some imitation because persisted in throwing his toy dog from the balcony of their hotel room.

There is increasing evidence that delayed echolalia is quite a different phenomenon from immediate echolalia. The following points may assist in differentiating the two echolalias:

(1) An echo reaction in terms of CNS function is an immediate reaction. Any temporal extension in terms of minutes and more is no longer immediate and therefore probably neurophysiologically non-similar.

(2) Immediate echolalia occurs in the presence of another speaker from whom the utterance is obtained. Delayed echolalia may also have its origins as an immediate echo of an interlocutor and thus show a common genesis. It may nevertheless, be registered in the absence of an overt echo reaction, etc.

(3) Newsoon, Carr and Lowaas (1977) examined the function of extrinsic reinforcers (provided by other people) and intrinsic reinforcers (provided by the organism itself in the maintenance of private (delayed) echolalia and socially directed speech. According to the authors, delayed echolalia is maintained by intrinsic reinforcement where as immediate echolalia is largely a function of in comprehensibility of verbal stimuli.

Battaxe and Simmons (1977, 1981) attempted to understand the significance of delayed echolalia for the perspective of language acquisition. They collected audio-recordings of the bed time solipoquies of an 8 year old autistic girl. All utterances were produced by the child in

the absence of other people in the environment, therefore they could not be considered communicative. The apparent linguistic sophistication of many of the utterances indicated to the researchers that they were forms of delayed echolalia.

Battaxe and Simons believed that the patterns of utterance production were a type of linguistic practice in which the child substituted, deleted and/or conjoined segments of utterances which resulted in delayed mitigated echolalia, that is delayed echolalia with structural changes imposed by the child. The authors indicated that such pattern. Practice may have been a strategy by which their subject segmented mem. . . . . forms which, they speculated, may be a first step towards the acquisition of a rule governed, generation of a linguistic system for echolalic children.

Kanner (1973) hypothesized that delayed echolalia represented an intermediate stage in movement from immediate echolalia to more flexible and creative language. Some researchers have acknowledged that delayed echolalia may serve some purpose in communication. Dyer and Hadden (1981) discussed in 'function categories' of delayed echolalia that

they noted in informal observations of autistic children. They indicated that some forms of delayed echolalia were produced with no apparent communicative intent. Rather than citing specific types of functions, Dyer and Hadden labeled their categories with terms that suggest structural rather than functional criteria (e.g. stereotypic, negativistic, egocentric, time lag, transferred and mitigated). Wolf and Chess (1965) proposed two categories of delayed echolalia, non-communicative repetition, which serves no apparent purpose, and communicative repetition, which is used for communication even though it consists of the exact phrases a child has heard others use. Ricks and Wing (1975) discussed the appropriate use of phrases which were copied from others, such as "do you want a biscuit"? used as a request, and Battaxe and Simmons (1975) made a brief reference to communicative delayed echolalia as serving a labeling function. Schuler (1976) also viewed echolalic on a continuance of communicative to non-communicative repetition. Schuler (1979) expressed the need to "study the function of the echoing behaviour observed with in the context of their occurrence" and stated that "no conclusions about the definition of and differentiation with in echolalia or echo-like behaviours can be drawn without systematic and detailed descriptions of their behaviors".

Various structural and functional analysis revealed that the general category of delayed echolalia encompasses utterances which may serve a variety of functions and which may be produced interactively and non-interactively, with or without evidence of comprehension and with varying degrees of relevance to the situational or linguistic context. These findings can occur with recent research investigating the functions of immediate echolalic (Prizant and Duchan, 1981) .

Fay makes a review of the various aspects of echolalic of different types described as in the following sections.

FUNCTIONAL CATEGORIES OF NON-INTERACTIVE DELAYED ECHOLALIA

(1) NON-FOCUSED : Such utterances appeared to be self-stimulatory (Lovaas et al. 1977) and sometimes involved verbal perseveration.

(2) **SITUATION ASSOCIATION** : The major distinction between these utterances and non-focused utterances was that the production of situation association echoes seemed to be mitigated by or associated with a particular identifiable stimulus in the environment, such a stimulus could include a feature of an object, person

or activity. Thus, some relevance to the linguistic or situational context could be identified. The production of such utterances may have been the product the learned association between utterances and objects/events.

(3) **REHEARSAL** : Rehearsal utterances appeared to serve a cognitive function of rehearsal prior to an interactive production of the same utterances. Most frequently, such utterances were produced with low volume or even in a whisper, with subsequent production of the utterance in a louder voice with non-verbal evidence of intercativeness and communicative intent.

(4) **SELF DIRECTOR** : Self directive utterances served cognitive function of motoric self-regulation in that they apparently helped the child to direct his overactions in motor tasks. Prizant and Duchan (1981) discovered, a similar self-regulatory function served by immediate echolalia. Luria (1966) described a developmental sequence in which over production of utterances is used to direct behaviour initially, with eventual covert or subvocal control of motor behaviour. Ricks and Wing (1975) noted that many autistic children appear to be delayed in moving to covert self regulation of behaviour. They also noted a lack of inner language

in autistic children, which may result in the need for overt production of utterances to facilitate behavioural self-regulation.

(5) **ON-INTERACTIVE LABELING** : This category was characterized by non-verbal attention to objects (e.g. holding, demonstrative gesture etc.). However, there was no apparent effort on the part of the child to direct the utterance to another person. The child appeared to be audibly labeling on object or person, possibly as a form of referential practice. The fact that only one utterance in this category was identified may be attributed to the interpersonal demands of the situations in which data were collected.

INTERACTIVE DELAYED ECHOLALIA

(1) Turn taking

Served as turn filters in dyactic exchange probably as an effort to fulfill a basic requirement of discourse. They were produced as part of an alternating verbal exchange between a child and the adult and often involved multiple repetitions of the same utterances. In some cases,the utterances may have been heard previously in the same

context (e.g. in the same room with the same person) but in contrast to the situation association echoes, they were produced interactively and in the context of filling a conversational turn. Prizant and Duchan (1981) prescribed a similar turn taking function for immediate echolalia. Immediate turntaking echoes as described by prizant and Duchan is that the child clearly waits for a turn in the verbal exchange before offering his or her echolalic contribution. The result of such an exchange is a superficial resemblance of the structure of dialogue even though the child is not adding relevant or new information in the interaction.

(2) **Verbal completion**

These utterances seemed to serve as turn filters; however, their production appeared to be determined by an adults initiation of a specific verbal routine. For turn-taking echoes, in contrast the delayed echoic utterances did not involve the completion of a verbal routine.

(3) **Label (Interactive)** :

These delayed echoic utterances were accompanied by demonstrative gestures such as pointing /showing which

served to indicate that they were in reference to the specific objects or actions, such demonstrative gestures were control to both non-interactive and interactive labeling; however, the latter category was produced with evidence of communicative intent as determined by gaze checks and/or non-verbal evidence of the expectation of some acknowledgment by the adults.

(4) **Providing information** :

Those utterances served to impart new information to the listener. Such information was not available in the immediate situational context and included expressions of internal state. In some instances the child appeared to be conveying information by producing an utterance over heard in a previous context in which some need was met.

(5) **Calling** :

In the few instances in which these utterances were used the child typically followed up with a request, suggesting that these utterances served as attention getting devices. One subject was reported to use the routine "hey youl" to get one's attention in his daily interactions and this utterance occurred twice during data collection.

(6) Affirmation :

These utterances indicated a willingness and/or a desire to engage in an activity or to accept an item (e.g. toy, food) which had been offered. All 3 children also indicated affirmation through immediate echolalia, which has been described as "affirmation by repetition" (Kanner, 1943) and "yes-answer" echolalia (Prizant and Duchan, 1981).

(7) **Requests** :

Delayed echoes serving a request function were goal directed. Typically the goal was acquisition of an object or some food. The child focus seemed to be on the object desired, and such instances were often produced when objects were being with held or when they were out of reach. Pronominal reversals were common feature of request delayed echoes because adults had referred to the child as "you" in the original situation.

(8) **Protest** :

The pragmatic force of these utterances coneveyed an apparent desire to prohibit an act or a statement of dissatisfaction about an action **taking place** or about **to**

take place. Protest echoes were often accompanied by physical attempts to stop the action and were often produces with an extreme emotive tone. The extent to which such utterances are produced may reflect the frequency of reprimands directed to a child.

(9) **Directive** :

Served to get an adult to initiate some action on an object or to move to a particular location. The primary distinction in between direction and requests is that, the goal of requests echoes was the acquisition of a desired object. For directives the goal was getting an adult to act and was therefore action nation than object focused.

A comparison of the production of interactive delayed echolalia, non-interactive delayed echolalia, serving cognitive functions rehearsal, self-directive, non-interactive labeling and other non-interactive delayed echolalia non-focused, situation association reveals the following patterns : the subject tested produced a substantially greater proportion of interactive delayed echoes versus non-interactive delayed echoes serving

cognitive functions versus other non-interactive delayed echolalia.

Delayed echoes which may be produced for communicative purposes may have highly idio-syncractic meaning, rendering them unconventional and non-communicative to most listeners.

Kanner (1946) used the term metaphorical language to denote such utterances vith private meaning. Finally, on the more conventional end of the continuum, delayed echolalia that closely approximate culturally agreed upon form/content/function relationships may be recognized immediatly as conventional signals ("Do you want to eat lunch"? used as a request for food).

Delayed echoes vary as to the extent of their conventionality, which may vary with different listeners and different contexts. These familiar with a child may comprehend the meaning and intended function of delayed echoes based upon shared experience, whereas such information may not be available to strangers. Some delayed echoes may never how intended to serve as conventional signals, whereas the function of others may be quite transparent to relative strangers because delayed echoes are, by definition; memorized utterances of a recognizable

language system one may Taist the issue of rich interpretation that is attributing greater intent and meaning to utterances than is actually the care.

Fay and Schuler (1980) and Prizant (1983) have argued that the notion of continuum must also be applied to delayed echolalic when considering the presence or absence of underlying communicative intent. Bates (1979) defined intentional communication as "signaling behave which the sender is aware, a priori of the effect that a signaling how on his listener, and he persists in that behaviour until the effect is obtained or failure is clearly indicated". For this category of request, protest, labeling,calling affirmative, directive and providing information, there was clear evidence of communicative intent. Utterances produced without communicative intent fell into three groups.

(a) Serving cognitive functions (Self-directive, rehearsal, non-interactive labeling).
(b) Those with no clear function (non-focused, situation association).
(c) Those serving a converstional or turn filling function (Turntaking, verbal completion).

Its likely that much of a child's early delayed echolalia is perloculionary, that is not produced with communicate intent although intent maybe assigned by others (Bates, Cumians and Volterra, 1973). Such utterances may be produced as situation associations on as conversational turn filters, in that the child may not have an intended effect in mind. When child begins to observe and realize that his or her utterances do have specific effects onthe behaviour of listeners and thus uses utterances more frequently and specifically for a particular effect, it can then be stated with some confidence that the child knows the relationship between his/her signal (e.g. Listner provides food) the effect of the signal on the listener (e.g. listener provides food) and the desired goal (e.g. acquisition of food). Its at this point that the childs behaviour can be said to show evidence of communicative intent. With autistic children, however, the production of non-conventional signals (utterances with private meaning) may preclude a listeners ability to infer communicative intent; this, reliable judgements of communicative intent may be difficult to make. Only behavioural evidence of communicative intent can be observed; intent itself is unobservable.

Intentional communication or the ability to use expressive signals in a preplanned manner in order to affect

the behaviour or attitudes of others is emerge in as a construct of significance in understanding the autistic syndrome. This is due largely to the fact that communicative intent lies at the cross roads of social relatedness, social cognitive understandings and communicative knowledge. There is preliminary evidence that for children with autism, the development oi preverbal intentional communication is necessary for the emergence of language (Sugarman, 1984; Watherby and Frutting, 1984). Similar to the development of normal children (Bates, Bengni, Bretherton, Camoioni and Volterra, 1979; Sugarman, 1984).

Intentionality may be defined simply as the delineate pursuit of a goal (Flavell, 1963). A child's behaviour is intentional if the child has as awareness or mental representation of a desired goal as well as of the means to obtain that goal (Piaget, 1952). Not all communicative acts are intentional. A child's behavior may have an effect on another person and serve a communicate function without the child having a preconceived awareness of that effect or of the means for obtaining that effect. In other words any behaviour may serve a communicative function regardless of whether or not the the effect was intended.

Kanner (1973) indicated that the most positive the social out-comes were for individuals who had acquired some speech prior to 5 years of age. He went onto describe a "steady succession of stages" which was characteristic of this group. No initiative or response - immediate parroting delayed echolalia with pronominal reversal - utterance, related to obsessive preoccupation communicative dialogue with proper use of personal pronouns and greater flexibility in the use of prepositions.

Prizant (1978) and Schuler (1979) noted that early repetition and imitation in the speech of only developing children has been found to serve a variety of communicative and cognitive function and they cited a need to analyze echolalic behaviour in autism from a functional perspective.

Two major questions have been posed in functional approaches to the study of echolalia in autism. First, what functions, if any do echolalic utterances (immediate/delayed) serve in communicative intent? Second, what is the role or function of echolalia in the acquisition of an oral language system for individuals with autism?

In reference to the first question, there is now an emerging body of evidence that many individuals with autism use immediate and delayed echolalia as a means to communicate for specific purposes. Kanner (1943) described the use of repetition for affirmation in his echolalia clients. Shapiro (1977) and Fay (1969) believed that immediate echolalia used by autistic children resulted from a lack of comprehension of language they were exposed to. They indicated that immediate echolalia responses represented attempts to participate in social interactions through repetition in lieu of the linguistic capacity to comprehend language and generate novel utterances. Schuler (1979) extended these arguments and stated that echolalia behaviour probably encompass a continuum of intentionality and communicativeness, rather that simply living an expression of only very primitive social intent (intent to keep interactions going). Hence children use both immediate and delayed echolalia as part of communicative acts to express specific intent in interacting with other persons. Second questions - what role does echolalia play in the acquisition of the ability to express communicative intent through speech and language?

Baltaxe and Simmons (1975, 1981) have argued,that echolalic behavior in autism is precipitated by specific perceptual deficits resulting in an inability to use prosodic features to segment language heard. Thus, autistic children must take alternative approach to rule induction in learning language structures that is, they first begin speaking by repeating multi-words units (e.g. phases, sentences) and more on to more creative and flexible language by segmenting and breaking down these units in development.

Prizant (1978, 1983) focused more specifically on the acquisition of communicative intent rather than language structure alone in considering the role of echolalia in progression from echolalic produced with no underlying communicative intent to echolalia utterances produces with communicative intent with little knowledge of linguistic structure or specific word meaning encompassed in the utterances, to utterances produced with communicative intent and greater appreciation of the internal linguistic structure and specific word meaning produced in such utterances. This progression reflects movement from prelocutionary or preintentional communicative acts to illocutionary or intentional prelinguistic communicative acts, to locutionary, or intentional communicative acts

produces with some underlying linguistic knowledge and true symbolic communicative behaviour may only be manifest in the locutionary reflecting knowledge of language structure and referential meaning. This account of the expression of communicate intent through echolalia serving as a foundation for expression of communicative intent through foundation for expression of communicate intent through true communicative language must be considered tentative until evidence becomes available through longitudinal research.

STAGES IN EMERGENCE OF COMMUNICATIVE INTENT IN ECHOLALIC BEHAVIOUR

Prelocutionary: Utterances repeated without communicative intent, unintended effect on listener is due to listener's assigning of intent.

Illocutionary : Utterances repeated with communicative intent, but with minimal appreciation of internal linguistic structure and semantic function relationships.

Locutionary : Utterances repeated with communicative intent with greater appreciation of internal linguistic structure and semantic functions or relationships. Rule governed changes ar often imposed (Mitigated echolalia).

Schuler (1986) and Wollner (1983) have stated that the language of children with autism is used to serve primarily instrumental function and is used to satisfy immediate needs. Shules,Fletcher and Navis-Welsh91977) studied the language of nine year old autistic boy from the perspective of communicative intent. They found that the childs more spontaneous utterances were used primarily to request objects (e.g. want ...) and to reject objects or events (e.g. no...). in the childs productive speech, noutterances serving a descriptive or commenting function were found. Interestingly, utterances serving more social functions referred to by the authors as informatives and interactives were used by the child but only through delayed echolalia.

It should be noted that attention directing functions which serve or social and are not characteristically absent in the autistic syndrome, but many be acquired by autistic syndrome, but many be acquired by autistic children or higher use of immediate and delayed echolalia (Prizant and Duchan, 1981; Prizant, and Ryddl, 1984).

MITIGATED ECHOLALIA : The term was introduced by Pick (1924) to describe the slight modifications he noted in the

echolalic of some of his aphasic patients. he interpreted mitigation as an indicating of the echoers conflict between the compulsion to imitative and breaking through of the power of gradually returning voluntary speech. Stengel (1947) noted two characteristic modifications -

(1) Introducing the first person singular into the repeated utterances, and (2) Appending an intelligent response to an echoed question or order.

Example Trigger	**Mitigated echo**
I guess you as	I guess I'M are
Show it to me	Show it to you.

Unfortunately, mitigation and its associated, prognostic improvement are not characteristic of autism (Stengel, 1947).

Normal children ascend developmentally to more symbolic forms of behavior (Pavlous second signal system) the autistic child becomes plateued at a level of persistent repetition. on the echoic continuum he would seem to have gained audio vocal competence but very little else. The consequence is a truncated transition- a developmental stagnation due to non-emergence of normal linguistic

competence. The persistent echoing maybe regarded as a maladaptive use of a normal mechanism because the options permit nothing else, same silence. Thus the echolalia signals pathology but is not itself a direct result of the condition. It may however be regarded as an indirect consequence if it extends in duration beyond the time of normal abatement. Extended echolalia points to a failure atleast for a time in the development of linguistic competence.

Philips and Dyer (1977) who strongly support the notion that autistic echolalia. is a late onset form of normal imitation functioning in young children have argued, therefore that the key to its progressive clinical elimination is in the condition itself.

Autistic children having missed out at the infant echolalic stage are further handicapped by late onset speech at an equivalent point by not generally receiving the spontaneous help that the normal child would. What they receive from adults who use language appropriate to their physical development perseverates them in echolalia which blanks off from their potentialities of contextual meaning other than at a level of naming vocabulary.

The literature has quoted many studies showing various echolalic patterns in autistic children. Hence, this study was taken up to study echolalic patterns in Kannada speaking autistic children.

METHODOLOGY

SUBJECTS :

The study was conducted to investigate the echolalic behaviour and general speech and language characteristics in six autistic childrens, ranging in age from 4-15 years. Their mother tongue was Kannada. All these subjects were diagnosed as having delayed speech and language with autism based on Rutter/Revised DSM III criteria. All these subjects had some amount of speech output i.e. they were verbal.

MATERIALS USED

Tape recorder model Cassettes, Picture books, 40 preselected (selected from KG and Ist standard Kannada books) sentences for repetition task and 10 preselected question for spontaneous speech (as given in the Appendix).

METHOD OF DATA COLLECTION

These subjects were made to come out with minimum of about 100 utterances. These utterances were elicited by following methods.

1) Describing the pictures shown to them.

2) Answering the questions asked to them.

3) Asking them to narrate a story.

4) Answering the questions asked to them from the story narrated.

5) Making them to repeat a list of 40 simple sentences of varying length in Kannada.

All these responses were recorded on tape recorder and this data was analyzed for its qualitative and quantitative aspects with respect to speech and language characteristics.

METHOD OF DATA DESCRIPTION AND ANALYSIS

The speech samples recorded were analyzed for various linguistic as well as paralinguistic features. The 100 utterances as well as the 40 preselected sentences with varying length for repetition stimuli task were considered for general language and echolalic description as follows:

Speech characteristics

Subjective evaluation of

-> Vocal characteristic of pitch, loudness and quality
-> Articulation
-> Intonation involving stress, rhythm and tuning.

Linguistic characteristics:

-> Comprehension abilities

-> Expression abilities

-> MLU in words will be calculated as total no.of words/total no.of utterances.

Other paralinguistic characteristics

Response : Whether there was response (echo) or not (answer of echo).

Response time : Whether there was delay in repetition task or no delay.

Audibility of echoes : Whether the echolalic responses were loud or whispered.

Prompting : Whether the children come out with echolalic utterances spontaneously (auto echolalia) or needed verbal prompting and whether the prompting needed was partial or full prompt.

Nature of echolalic utterances:

Whether they were

-> Complete or incomplete repetitions

-> Reduced/expanded echoes.

-> Mitigated or modified echoes.

-> The type of stimulus words omitted; whether content of functional words.

Pronouns in echoes:

Whether pronouns are present or absent. If it is present, is there any pronoun confusion as reversal.

Deixies in echoes:

Dietetic terms present or absent like temporal terms today/tomorrow/now/then.

Personal terms - he/she/I/you
Locative terms - here/there

Functional categories of echoes:

Turn taking- utterances used a turn fillers in *an* alternating dyadic verbal exchange (Prizant and Duchan, **1981)**.

Affirmatory : Utterances used to indicate affirmation of previous utterances (Prizant and Rydell (1981) .

Self regulatory : Utterances which serve to regulate ones own actions. Produce in synchrony with motor activity (Prizant and Rydell, 1981).

Based on the observations as above,the results were obtained and discussed.

RESULTS AND DISCUSSION

Table-I shows the details regarding subjects.

Table-I: Subject description

Sub-jects	Age (years)	Sex	Mother tongue	Mental ability	Provisional diagnosis
S1	4	Male	Kannada	Mild MR	Delayed speech and language with autism.
S2	5	Male	Kannada	Mild MR	Delayed speech and language with autism.
S3	5	Female	Kannada	Mild MR	Delayed speech and language with autism.
S4	8	Male	Kannada	Mild MR	Delayed speech and language with autism.
S5	11	Male	Kannada	Mild MR	Delayed speech and language with autism.
S6	15	Male	Kannada	Mild MR	Delayed speech and language with autism.

Table-1 gives the description of subjects. Six subjects were studied with age ranging from 4-15 years. There were five males and 1 female. Their mother tongue was Kannada. According to psychological assessment, all the subjects fell under mild categories of mental retardation. All of them were provisionally diagnosed as delayed speech and language with autism. Language known to them was Kannada and a few occasional English words.

Table-II: Speech and Language Characteristics

Subjects	Speech characteristics			Language characteristics		
	Voice	Articulation	Prosody	Comprehension	Expression	Mean lenth of utterance (MLU)
Rohan (S1)	Uses soft voice Pitch and quality was normal.	Had articulatory errors. The main types of errors seen were omission, distortion, k, g, T, D.	Used slow rate of speech.	Comprehension was better than expression. He comprehends simple commands.	His expression poor. He expressed in only single word utterances that also with lot of	MLU was one word utterance in the spontaneous speech & echolalic utterances (on lot of prompting.
Sushanth (S2)	His voice is appropriate in terms of pitch loudness and quality occasionally his voice becomes load	Normal oral and articulatory movement.	Prosody is not affectd. Has normal rate of speech and uses appropriate stress & intonation in both echolalic & non echolalic utterance.	Comprehension is good. He could comprehend simple to complex commands He could also comprehed 'wh' questions accept 'why' & 'how'.	The case has spontaneous speech & expresses in simple sentences. Occasionally he, repeats the part of question (Immediate echolalia).	He has spontaneneous speech When asked questions, he answers in 2-3 words utterances But in the echolalic utterances he could consistently use 3-4 words sentences.

Subjects	Speech characteristics			language characteristics		
	Voice	Articulation	Prosody	Comprehension	Expression	Mean lenth of utterance (MLU)
Suku (S3)	Her voice was appropriate in terms of pitch, loudness and quality.	Had normal oral and articulatory movement,	Used normal prosody.	Comprehension is very good Comprehends even complex commands follows general conversation.	Expression is good. Expresses in simple to complex sentences. Also expresses personal experiences, events or incidents .	Uses 4-5 word utterance in both spontaneous speech and echolalic utterances,
Lokesh (S4)	On subjective evaluation his voice war, monotonous.	Had misarticulations. Had slurred speech sounds misarticulated were s, ζ , r, T, D	The case used slow rate of speech has inappropriate intc) nation pattern and stress.	Comprehension is better than expression. He comprehends even complex commands compre 'wh' questions.	Had spontaneous speech.Expresses in simple to complex sentences	Used 3-4 word utterances in spontaneous speech and in echolalic utterances.

Subjects	Speech characteristics			Language characteristics		
	Voice	Articulation	Prosody	Comprehension	Expression	Mean lenth of utterance (MLU)
Mohan (S5)	The case uses soft voice, sane times leading to whisper. Occassionally it was alternated by spells of loudness sometime pitch fluctuates from high to low	There is mild articulatory errors. The main types of errors seen are omission and & distortion of following sounds s, ζ, r T, D	It is effected. He hs fast rate of speech. Uses monotones voice. Stress used was not appropriate.	Comprehension poor. Comprehend simple commands. At first when given the command, he repeats the last part of it on verbal prompting very rarely responds.	The case does not have spontaneous speech. He just repeats whatever is been said to him. He also says days of weeks, name of months, and counts no.upto 20. He only reply when his name is asked.	The case does not have spontaneous But he could consistently use 2 words utterances in the echolalic utterance.
Chetan (S6)	The case uses very soft voice sometimes leading on to the whisper	Has mild articulatory errors, distorted and omission of /r/ /T/ /D/ /S/ /ζ/.	Has fast rate of speech. Stress & intonation are not appropriately used both in spontaneous speech and echo lalic utterances.	Comprehension is poor. Comprehends simple commands Comprehends 'wh' questions	He has spontaneous speech, & expressses in single or 2 word utterances sometimes needs prompting. Often repeats the last part of question than when prompted answers them correctly ie. has immediate echolalic in spontaneous speech.	In the spontaneous speech. Uses 2 words utterance and in the echolalic utterances .

Table-II gives the description of general speech and language characteristics where speech characteristics (articulation, voice, prosody) and linguistic characteristics (comprehension, expression abilities and mean length of utterance) are included.

All the subjects showed an indication of better comprehension than expression. They could comprehend simple to complex commands but, failed to come out with complex utterances spontaneously. There was delay in language development in these subjects which agrees with the studies quoted in the literature.

S2 and S3 had normal oral and articulatory movement while S1, S4, S5 and S6 had articulatory abnormalities. The main types of errors seen were omission and distortion of following sounds - s, ,r, T, D. This agrees with the study done by Birth (1989); Shyamala (1989). However, this does not agree with Schuler, (1980) and Asha, (1995) who found absence of articulatory abnormalities in autistic population.

SI, S5 and S6 used soft voice, occasionally used loud utterances. While S2, S3 and S6 used voice which was

appropriate in terms of pitch, loudness and quality, prosody was normal in S2 and S3 while it was affected in S1, S4, S5 and S6 (slow rate of speech, monotonous voice,stress and intonation was inappropriate), which supports the findings of Fay and Schuler, (1980); Baltaxe and Simmon, (1985).

Mean length of utterance (MLU) was found to be longer in echolalic utterances when compared to spontaneous speech. The average MLU in echolalic utterance was 3-4 words while in spontaneous speech it was 2-3 words, accept S1 whose MLU was very small i.e. one word utterance. There was one to *one* correlation between echolalic ability and language ability. While, there was no one to one correlation between echolalia and age/sex. The scores were randomly scattered i.e. both younger and older subjects had high echolalic scores.

Table-Ill :Echo Description (Description of Echolalic Utterances)

	S1	S2	S3	S4	S5	S6
Response	Present	Present	Present	Present	Present	Present
Response time (Delay/No Delay)	For 35/40 responses were delayed for about 6-10 secs.	No delayed responses	At times response was delayed (3-6 sec.)	Response was delayed for about 2-3 sec. for almost all utterances.	At times 4/40 delayed respoases were notied of 3-7 secs.	Response was immediate.
Audibility of response (loud/soft/ whispered)	Response was very soft.	Normal loudness occationally gave loud responses.	Used normal loudness.	Used normal loudness.	Usually soft occasionally gave loud responses.	Very soft.
Prompting (Full/partial prompting)	He needed prompting (full verbal prompting) even for smaller utterances.	Old not need prompting for 3-4 words echo utterances. But needed verbal prompting for very long (4-5) words echo utterances. Also needed prompting for pronouns and diexies.	Needed prompting for longer (4-5) word echo utterances. Otherwise said only last part of utterances.	The subject need prompting for longer echo utterances.	Does not need prompting for single and two word utterances. But, needed verbal prompting for 3 or 4 words utterances.	The subject did not need any prompting for 3-4 words longer utterances. But needed for 5 words utterances.

	SI	S2	S3	S4	S5	S6
Response	Present	Present	Present	Present	Present	Present
Auto	17/40x100 = 42.5%	40/40x100 =100%	40/40x100 =100%	40/40x100 =100%	40/40x100 =100%	
Reduced echolalia	NIL	NIL	NIL	NIL	5/40 repeated only last part & utterances (Ex.taLe for ma:DutaLe)	NIL
Expanded Echolalia	NIL	NIL	NIL	NIL	1/40 (Ex.nimana for nima)	NIL
Mitigated echolalia	NIL	NIL	NTT,	NTL	NIL	NIL
Categories of word omitted	Pronouns as well as deictic terms were absent both in echo, utterances & spontaneous speech.	Pronouns and deictic terms were absent on the imme-diate repeti-tion in echo utterances. But on prompt ing said correctly. Does not use them in spon taneous speech.	NIL	On immediate repetition the case omitted the pronouns and deictic terms in echo utterances. On prompting used corectly.	Used pronouns and deixes correctly in two word echo utterances. But it was absent in longer echo utterances & also in the spontaneous speech.	Used pronouns and diexis appropriately in echo utte-rances. But absent in spontaneous speech.

	S1	S2	S3	S4	S5	S6
Response	Present	Present	Present	Present	Present	Present
Functions -Regulatory -Turn taking -Affirmation	Appropriate Turn taking Regulatory functions and affirmation seen.	Appropriate Turn taking Regulatory functions and affirmation present.	Appropriate	Appropriate	Appropriate	Appropriate

Table III gives the description of the echolalic utterances of these subjects. This table shows that there was response present in all the six subjects. S2 and S6 gave immediate response while others at times came out with some delay in the response, where they needed little prompting. The average delay time that was noticed was 5-10 secs. S1, S5 and S6 gave very soft response and they needed prompting to give loud response while S2, S3 and S4 used normal loudness.

All the subjects needed prompting. S1 needed prompting even for smaller utterances S2, S3, S4, S5 and S6 needed prompting only for longer utterances.

There was reduced echo and expanded echo noticed in one of the subject i.e.S5 expanded echo was noticed only for one utterance i.e. for (nimma) the response was (nimmana) while reduced echo were more in number and it was seen only for longer utterances i.e. as the length of utterance increased the number of reduced echo also increased e.g. for ma:Duta:le), (barutta:Le) and hogutta:Le) etc. the response was (taLe). The percentage of reduced echo was 1.5% (5/40 x 100) which supports the finding of Bulum and Steachor (1974) in their observation of truncated echolalia autistic group.

Mitigated echolalia was not seen in any of the subjects which clearly supports the finding of Shapiro, Roberts and Fish (1970), that it is seen in high functioning individuals with higher and advanced language functioning. The present subjects showed poorer verbal functioning.

Use of pronouns and diectic terms was appropriate for S6 in echolalic utterances, but absent in the spontaneous speech. He comprehends them but does not use them, instead, he addresses by name.

In case of S2, S4 and S5 their use was absent on immediate repetition, but on prompting, they used them correctly, but their use was absent in spontaneous speech. S2 and S4 comprehend these terms, but do not use in spontaneous speech while S5 had difficulty both in comprehension and expression of these terms. S1 showed absence of these terms in echolalic utterances and spontaneous speech. Which agrees with the studies quoted in the literature citing that those subjects show pronominal reversal and inappropriate diectic function (Bartak and Rutter, 1947; Shyamala, 1989; Asha, 1995).

While S3 used these categories of words appropriately both in echo utterances and spontaneous speech.

Pragmatic : Functions like regulatory, turn taking and affirmation were present and were appropriate in all the six subjects which agrees with the study done by Prizant and Duchan, 1981 on echolalic subjects; Asha, 1995).

Table-IV : Echo Descripn (Quantitative analysis of echolalic utterances)

Subject	Total No.of target echo utterances	Total no.of echolalia (7/40x100)	Total no.of complete echolalia (7/40x100)		Total no.of partial echolalia (7/40x100)	Words per echo. Total words/Total echolalia
			Immediate response	On Prompt-ing		
S1	40	17/40x100 =42.5%	4/40x100 =10%	11/40x100 =27.5%	13/40x100 =32.5%	42.5%
			Total = 37.5%			
S2	40	40/40x100 =100%	22/40x100 =55%	18/40x100 =45%	18/40x100 =45%	100%
			Total = **100%**			
S3	40	40/40x100 = 100%	35/40x100 =87.5%	5/40x100 = 12.5%	5/40x100 =12.5%	100%
			Total = 100%			
S4	40	40/40x100 =100%	23240x100 =57.5%,	13/40x100 = 32.5%	17/40x100 =42.5%	100%
			Total = 90%			
S5	40	40/40x100 =100%	19/40x100 47.5%	16/40x100 = 40%	21/40x100 = 52.5%	100%
			Total = 87.5%			
S6	40	40/40x100 =100%	29/40x100 = 73.5%	8/40x100 = 20%	11/40x100 = 27.5%	100%
			Total = **92.5%**			

Table IV gives echo distribution i.e. quantitative analysis of 40 echolalic utterances which studied total number of echolalia revealing high percentage of echolalic utterances in case of S2, S3, S4, S5 and S6 (100%) while S1 had low percentage of echolalic utterances i.e. 42.5% (17/40x100 = 42.5%). It was noticed that they have both complete and partial echoes. S2, S3, S4 and S6 had more of complete echolalic utterances when compared to partial utterances. When these subjects were prompted, they gave 100% complete echo utterances. While S1 and S5 had more of partial echo utterances when compared to complete echo utterances and prompting needed was also more for these subjects when comparing the language ability and the echolalic ability it. was found that S2, S3, S4 and S6 had high language and echolalic ability. While S1 and S5 showed low language and echolalic ability which supports the fairly prominent view that presence of echolalia indicated better language abilities (Woolfolk and Lynch, 1986) .

Table-V : Description of Echolalia in spontaneous speech.

	S1	S2	S3	S4	S5	S6
Echolalia in spontaneous spech	The case had very limited verbal output He expressed only in single or 2 word utterances that too on lot of prompting. His echolalic ability was also poor Very occasionally he repeated the last word of question. His response was - e:nu	The case has spontaneous speech. When asked simple questions he could answered them correctly But when asked complex questions. He repeated last part of it once. On prompting he answered it corectly ni:nu hege school ho:guttiya? His respoase was hogott:ya.	The case has spontaneous speech when asked questions she repeated last part of sentence.Once for simple question. But than without prompting immediately She answered prompting, appa office inda he:ge arutta:re? He said hegebarutta:re Only once than on prompt answered it.	Occasionally the case repeated last part of question. When the question asked was difficult one. But than when prompting he answered it correctly ex.: ni:nu yake school ige hogutti:ya. Once on prompting he answered it correctly.	The case does not have spontaneous speech. He repeated whatever is said to him. Without understanding usually he repeated last 2 words of the question. Even when prompted (full) did not give correct responses ex: idu e:nu? He repeated the question.	The case has spontaneous speech . He has immediate echolalia when asked questions the case repeated last part of question once. On prompting (asked again) he gave correct answer ex. ninna ammana hesaru e:nu? When asked, he said - Hesaru e:nu? But when the question repeated. He answered it.

Table-V gives description of echolalic behaviour in spontaneous speech. S2, S3, S4 and S6 had spontaneous speech. It was noticed that when these subjects were asked simple questions, they answered them correctly. Occasionally, they repeated last part of question. But, when they were asked difficult or complex questions using 'why' and 'how' question markers they repeated last part of question. While S5 and S6 repeated whatever was said to them, but, on prompting they answered simple questions. S1 had poor echolalic ability.

All the subjects had more of partial echolalia when compared to complete echolalia in spontaneous speech. Reduced echolalia was seen only in S5 and S6. While none of the subjects exhibited mitigated and expanded echolalia. Based on these findings we can conclude that S2, S3, S4, S5 andS6 had immediate echolalia. Which agrees with the findings of Rutter, 1978; Fay, 1973; Shapiro, 1977 and Shyamala, 1989.

When comparing the linguistic ability and echolalic behaviour. It has been seen that there is one to one positive correlation between linguistic ability and the echolalic ability in the repetition tasks. While there is no one to one correlation between linguistic ability and

echolalia in spontaneous speech. S2, S3 and S4 could comprehend simple to complex commands i.e. their comprehension was better. hence, they could answer simpler questions without any prompting, but they had a tendency to repeat the complex question rather than answering them. On the other hand S5 and S6 had poor comprehension. They could understand only simple question hence, they had a tendency to repeat whatever had been asked to them. But on prompting they could give correct response for simple questions. Based on these results we can conclude that immediate echolalia in spontaneous speech is due to poor comprehension. Which agrees with the finding of Fay, 1973; Shapiro, 1977 that immediate echolalia is primitive attempt to maintain social contact when an individual is confronted with language beyond their linguistic competence.

Table - VI : Quantitative analysis of echolalia utterances in spontaneous speech

Subject	Total No. of stimuli	Total no.of immediate echolalia	Total no.of complete echolalia	Total no.of partial echolalia	Total no.of reduced echolalia	Total no.of expanded echolalia	Total no.of mitigated echolalia
S1	10	3/10x100 = 30%	NIL	3/10x100 = 30%	NIL	NIL	NIL
S2	10	6/10x100 = 60%	NIL	6/10x100 = 60%	NIL	NIL	NIL
S3	10	4/10x100 = 40%	NIL	4/10x100 = 40%	NIL	NIL	NIL
S4	10	6/10x100 = 60%	NIL	6/10x100 = 60%	NIL	NIL	NIL
S5	10	9/10x100 = 90%	2/10x100 = 20%	7/10x100 = 70%	4/10x100 = 40%	NIL	NIL
S6	10	8/10x100 = 80%	NIL	8/10x100 = 80%	3/10x100 = 30%	NIL	NIL

Table-VI gives quantitative analysis of echolalic utterances in spontaneous speech. All the six subjects exhibit immediate echolalia in the spontaneous speech. In case of S2, S4, S5 andS6 the percentage of echolalia is found to be high i.e. they repeated more than 50% of the questions asked to them. While S1 andS3 had low percentage of echo utterances in spontaneous speech i.e. less than 50%.

Partial echolalia is found to be more when compared to the complete echolalia. Complete echolalia was seen only in one subject i.e. S5. Out of 10 utterances, he repeated only 2 utterances completely. While partial echolalia was seen in all the six subjects. None of the subjects exhibited expanded and mititgated echolalia in spontaneous speech. Which clearly supports the finding and Shapiro, Roberts, and Fish (1970) that it is seen in high functioning individuals with higher and advanced language functioning. Reduced echolalia was seen in only two subjects i.e. S5 and S6. Which supports the finding of Buium and Steacher (1974). While S1, S2, S3 and S4 did not exhibit reduced echolalia.

Thus in accordance with various studies carried out in literature, this study was also shows that autistic children

shows high echolalic ability, immediate echolalia with abnormalities in speech and language characteristics i.e. delay in language, abnormalities in articulation, voice, prosody and usage of pronouns.

SUMMARY AND CONCLUSION

This study was carried on with the aim of studying echolalic pattern seen in Kannada speaking autistic childrens. Six autistic childrens were chosen, aged 4-15 years to explore their speech language characteristics and echolalic behaviour. Out of them 1 was female and 5 were males. Data was collected where their utterances were tape recorded and a diary was maintained, then recorded responses were transcribed in I.P.A. This data was further qualitatively and quantitatively analyzed, where various features like - speech characteristics, language characteristics and other paralinguistic characteristics, echolalic utterances and their characteristics and echolalia in spontaneous speech etc. were analysed.

Based on the analysis various conclusions were drawn, they are as follows :

Subjects had better comprehension than expression.

Most of them showed vocal, prosody and articulatory abnormalities.

Spontaneous speech was absent in two of the subjects i.e. S1 and S5 while it was present in S2, S3, S4 and S6.

The nature of echolalia varied across the six subjects.

- Most of them had high percentaged echolalic utterances in the repetition task except S1 who had poor echolalic ability in the repetition task.
- Both complete and partial echolalia was noticed however, percentage of palatial echolalia was more when compared to complete echolalic both in repetition task as well as spontaneous speech.
- Reduced and expanded echolalia were noticed in one of them
- Mitigated echolalia was not present in any of them.
- In the repetition task most of the subjects repeated last part of the utterances but when they were prompted they could say complete utterances.
- There is one to one positive correlation between echolalic ability in repetition task and linguistic ability.
- There is one to one positive correlation between echolalic ability in repetition task and mean length of utterance.
- Usage of pronouns and dietetic terms were absent in spontaneous speech.
- Usage of pronouns and dietic terms were absent on immediate echolalic utterances on repetition tasks but, on prompting were used correctly.
- Immediate echolalic was seen in spontaneous speech in case of S2, S3, S4, S5 and S6.

- The percentage of immediate echolalia in spontaneous speech was more for those subjects who had poor comprehension ability. Hence, we can conclude that immediate echolalia is a result of poor comprehension ability.
- All the subjects needed prompting to answer question in the spontaneous speech.
- Tunn taking, affirmation and regulatory functions were present and were appropriate in these subjects.

There was one to one correlation between echolalic ability and language ability. Hence, based on the results of the study we can conclude that autistic children have high or good echolalic ability and show immediate echolalia along with the other speech and language abnormalities.

These results have practical implications in the management of autistic children and each of the about findings need to be handled individually in each autistic case.

LIMITATIONS OF THE STUDY

The results of the present study are restricted owing to the following limitations :

1. The number of subjects included were only six owing to the stringent criteria.
2. The target stimuli used were lessor in number.
3. In present study only immediate echolalia was studied. Inclusion of delayed echolalia would have yielded more information.
4. The response of subjects were recorded in audio tapes and diary, instead videotaping would have been yielded more informations. Specially with respect to the communication acts and functions.

Take care of the above limitations further studies can be carried out in this area to study various language behaviour in autistic children in depth which in turn would help in their management program.

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APPENDIX
LIST OF PRESELECTED SENTENCES

1.	ಬಾ	ba:
2.	ನಾಯಿ	na:yi
3.	ಕೈ	kai
4.	ಬಸ್ಸು	bassu
5.	ತಟ್ಟೆ	taTTe
6.	ಬಳ್ಳಕು	baLapa
7.	ಇವನು ಬಸವ	ivanu basava
8.	ಅವರು ಎಲ್ಲಿ?	avaru elli?
9.	ಅವಳು ಕಮಲ	avaLu kamala
10.	ಮುಖ ತೊಳಿ	mukha toLi
11.	ಎರಡು ಕಿವಿಗಳು	eraDu kivigaLu
12.	ಇವರು ಇಲ್ಲಿ	ivaru illi
13.	ನಾನು ರಮೇಶ	na:nu rameSa
14.	ಅಪ್ಪ ಎಲ್ಲಿ?	appa elli?
15.	ಅಮ್ಮ ಬಂದಳು.	amma bandaLu

16. ನೀನು ಯಾರು? ni:nu ya:ru

17. ಪುಸ್ತಕ ಎಲ್ಲಿ? pustaka yelli

18. ಬೆಳ್ಳಗು ಕೊಡು. bya:gu koDu

19. ನಿನ್ನ ಹೆಸರು ಏನು? ninna hesaru ye:nu

20. ಇಂದು ಯಾವ ದಿನ? indu yava dina

21. ನೀನು ಹತ್ತಿರ ಬಾ ni:nu hattira ba:

22. ನನ್ನ ಅಮ್ಮ ಜಾಣೆ nanna amma jaNe

23. ಅನೆ ಬಣ್ಣ ಕಪ್ಪು a:ne baNNa kappu

24. ಇಂದು ಭಾನುವಾರ indu bhanuvarra

25. ಬೆಕ್ಕು ಹಾಲುಕುಡಿಯುತ್ತಿದೆ bekku ha:lukuDiyuttide

26. ಈಗ ಶಾಲೆಯ ಸಮಯ i:ga Saleya samaya

27. ಅಮ್ಮ ಕೂಡಿನಲ್ಲಿದ್ದಾಳೆ amma ru:minalliddaLe

28. ಕಮಲ ಉಗಿದ ಮಾಡು kamala u:ta ma:Du

29. ನಾನು ನಾಳೆ ಬರುತ್ತೇನೆ na:nu na:Le barute:ne

30. ನೀನು ಯಾವಾಗ ಬರುವೆ? ni:nu yavaga baruve

31. ಅಪ್ಪ ಆಫೀಸಿಗೆ ಹೋಗುತ್ತಾರೆ appa a:phisige hoguta:re

32. ಅಕ್ಕ ಚೆನ್ನಾಗಿ ಹಾಡುತ್ತಾಳೆ akka channagi haDuttaLe

33. ಕಮಲ ಆಟ ಆಡುತ್ತಾಳೆ. kamala a:ta a:Duta:Le

34. ರಾಮ ಶಾಲೆಗೆ ಹೋಗುತ್ತಾನೆ.
ra:ma Sa:lege ho:guttane

35. ತಾತ ಅಂಗಡಿಯಿಂದ ತಿಂಡಿತರುತ್ತಾರೆ.
ta:ta angaDi inda tinDitarutta:re

36. ಅಜ್ಜಿ ಮನೆಯಲ್ಲಿ ತಿಂಡಿ ಮಾಡುತ್ತಾಳೆ.
ajji maneyalli tinDi maDuttazre

37. ಮನೆಯ ಮುಂದೆ ತೋಟವಿದೆ.
maneya munde to:ta ide

38. ನಾನು ಮನೆಗೆ ಹೋಗಿ ಬರುತ್ತೇನೆ.
na:numanege ho:gi barutte:ne

39. ನಾನು ತೋಟದಲ್ಲಿ ಆಟ ಆಡುತ್ತೇನೆ.
na:nu to:tadalliba:l a:ta a:Dutte:ne

40. ಅಮ್ಮ ಸೀರೆಗೆ ಕೈಚೀಲ ಹೊಲಿದು ತರುತ್ತಾಳೆ
amma sitige ho:gi haNNu tarutta:re

UTTERANCES TO ANALYSE ECHOLALIA IN SPONTANEOUS SPEECH

1. ಇದು ಏನು?
idu enu?

2. ನಿನ್ನ ಹೆಸರು ಏನು?
ninna hesaru e:nu?

3. ಇಂದು ಯಾವ ದಿನ
indu yava dina?

4. ಅಕ್ಕ ಏನು ಮಾಡುತ್ತಾಯಿದ್ದಾರೆ?
akka e:nu maDutta:iddare?

5. ನೀವು ಮಾರ್ಕೆಟ್‌ಗೆ ಯಾರ ಜೊತೆ ಹೋಗುತ್ತೀಯಾ?
nimumarketige yara jote hotuttiya?

6. ನಿನ್ನ ಅಪ್ಪ ಎಲ್ಲಿ ಹೋಗಿದ್ದಾರೆ?
ninna appa elli hogiddare?

7. ಅಪ್ಪ ಆಫೀಸಿಂದ ಯಾವಾಗ ಬರುತ್ತಾರೆ?
appa a:phis inda yavaga baruttare?

8. ನೀವು ಸ್ಕೂಲಿಂದ ಮನೆಗೆ ಹೇಗೆ ಹೋಗುತ್ತೀಯಾ?
ni:nu schoolinda manege hege hoguttiya?

9. ಇವತ್ತು ಏನು ತಿಂದಿ ತಿಂಡಿ?
ivattu e:n tinDi tende?

10. ನಿನ್ನ ಅಮ್ಮನ ಹೆಸರು ಏನು?
ninna ammana hesaru e:nu

RETROFLEX

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