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**AUTISM: THEORETICAL BACKGROUND AND
LANGUAGE PROBLEMS OF THE AUTISTIC**

Dissertation submitted to the Jawaharlal Nehru University in partial
Fulfillment of the requirement for the award of the degree of
MASTER OF PHILOSOPHY

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2004



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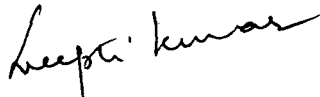
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Acknowledgements

Many people as well as several organizations have contributed to this Dissertation in a variety of ways. I am happy to have the opportunity to record my sincere appreciation to all of them.

My deepest gratitude is to my Supervisor, Prof. Vaishna Narang who inspired me with confidence about correctness of the chosen subject and supported me a lot at the time when I had almost given up. I benefited tremendously from her patient hearing and support, for my thoughts and her exceptional patience.

My special gratefulness is to my friends and mates, who have warmed my world with their friendship and support in good and difficult moments of my life here in JNU and I could hardly carry on during these years without daily warm words of encouragement and brief interludes of fun with them.

Finally, and probably most importantly, I am eternally indebted to all members of my family. In particular, I bend before my esteemed parents, who so recklessly believed in me and always supported me in my all undertakings, even the wildest ones.


(Deepti Kumar)

Chapter 1

INTRODUCTION

Language is an integral part of our lives. It is a special skill that we possess. Each individual has a special skill for discovering the rules of his language from a minimal linguistic input, and thus each child creates language afresh in response to an increasing need to communicate with others. Thus we learn language, as everything else, through selective reinforcement of our spontaneous behavior.

Language is all about communication. There are basically four modes of communication: speaking, hearing, reading and writing. If a person lacks ability in one or more modes of the communication, he is certainly going to be handicapped and such disabilities are common in life. There are many who totally lack the ability to communicate in speech, or who are totally deaf, or who cannot read and write. But these disabilities, it should be noted, are not equal in importance. Of the four modes, the first two are fundamental. Assuming that a child grows up in a normal human environment, speech will develop naturally-without formal training. Hearing too, is a natural development capacity-a prerequisite for normal speech. By contrast, reading and writing do not develop naturally; they are more sophisticated skills, which have to be formally taught, over several years and which many millions of

people through out the world have never learned. Of the first two, it is the speech, which generally attracts the most attention, because it is so much more obvious a facility to develop, than is hearing. Failure to cry or babble properly, in the first months of life, will usually be noticed and investigated. Failure of hearing, on the other hand, may not be spotted at all-and may indeed stay ignored until well into the second year of life. When the child's failure to respond to noises, or to develop early words and phrases, may make the possibility of deafness slowly dawn on the parents.

Autism is one such disorder, where the speech is impaired and deviant. The range of spoken language difficulties associated with autism are wide; again there are extreme cases where there are additional language, and or severe learning difficulties, where spoken language never develops. At the other extreme there are children who have highly developed language skills, in the sense that their grammar and pronunciation are excellent; yet regardless of the level of spoken language competence, there will be problems with the aspects of communication. There will be difficulties in understanding and using facial expressions, express gestures, body postures and positioning, and where there is spoken language some problems with the meaning (semantic aspects and pragmatic aspects) of language.

Theoretical Background

Autism was first described by Leo Kanner, in 1943, in his paper "Autistic disturbances of affective contact". In this paper, he described the syndrome that he called early infantile autism. Kanner was fascinated and intrigued by the social withdrawal, communication peculiarities, insistence on sameness and other idiosyncrasies of the eleven children, who although similar to each other, were strikingly different from the children with whom they were often associated, that is those diagnosed with childhood schizophrenia.

Following Kanner's original description in 1943, there have been many different perceptions and approaches to children with Autism and their families. Autism was initially viewed as an emotional problem and was thus of interest to the psychoanalytic therapists in the early years, with group therapy for both the parents and children. They also proposed separating children with Autism with their families, holding them responsible for this developmental disability. By 1960, this approach to Autism came to an end. Investigators in this era began refuting the psychoanalytic theory and started arguing for biological causes. Thus came the focus of research during this decade. The final blow to the psychoanalytic theory was the empirical proof that parents of children with Autism were no different from parents of children with other types of learning and developmental problems. Studies focused on their family interactions, personal characteristics and general functioning. The fall in psychodynamic theories came, in part from accumulating evidence on

the biological nature of Autism. As the **evidence** against the **psychogenic** formulations mounted more attention **was focused** on neurological and biological aspects and causes of Autism. **As a result** more attention was paid on the study of seizures, nystagmus, **prenatal and perinatal** insults. Theories about genetics differences and neurological **dysfunctions** began as an **answer** to the psychoanalytic clause. With this **came** the need for an alternative treatment approach. Behavior therapy evolved **with** some impressive teaching techniques to such children. Over the past 15 years the definition and approach to Autism has been refined to **understand** the lifelong nature of the disability, its characteristics and essential **features** including its onset records. The diagnosis of Autism is based on multiple **sources** of information, including parent interviews and behavioral observations.

In spite of advances in biological **understanding** there are as yet no clear biological markers for autism. This means that **it is still** diagnosed on the basis of behavior, Dr.Rita Jordan in one of her **papers** says that, "It is important to realize that autism does not lie in that **behavior**, but in the developmental process that underlie it. Behavior can only be a **guide** to these and there are no behaviors (or even lack of behaviors) that **are of themselves** 'autistic'. It is the area of development that is affected, but **the way** it manifests in any individual will depend on the pattern of the individual's abilities and disabilities". Individuals with Autism are very **different** from each another, but it is what they have in common, that forms the **basis** of diagnosis. The basis of all diagnostic systems for autism is the triad of **impairments**.

Since Leo Kanner initially described Autism in 1943, the impairments in autism have been grouped into three areas of functioning termed the "triad of impairment" by Wing and Gould (1979).

- (1) Reciprocal Social Interaction
- (2) Verbal and non verbal communication
- (3) Restricted repertoire of activities and interests.

DSM-IV divides the diagnostic criteria among these three impairments, such that a child to be autistic, needs to fulfill at least two criteria from the social category, and at least one from both the communication and restricted repertoire of activities categories.

Reciprocal Social Interaction

The areas of Social Interaction have been divided into four criteria by the DSM IV that are totally absent or impaired in children with autism. The first criteria is the "marked impairment in the use of multiple non verbal behaviors, such as eye-to-eye gaze, facial expression, body postures and gestures to regulate social interaction." In the area of eye-to-eye gaze an autistic child may completely avoid any eye contact or may stare so hard and intently at its listeners, so as to make them extremely uncomfortable. As far as the facial expressions are concerned, an autistic person may display a bland or flat display on his face or may show an inappropriate intensity of laughter or

distress. Body posture or gestures **may** lack non-verbal account, such as head nodding painting, or the shrugging of shoulders.

The second criterion is the “failure to **develop** peer relationships appropriate to ones developmental level”. This **criteria** is applicable to those autistic children who are not interested in making **friends** or staying in a peer group, or those who want to have friends but **don't** know how to appropriately do the needful, or establish such relationships. This criterion emphasizes the appropriateness of friendships relative to **one's** developmental level. Thus a mentally retarded adult with a mental age of 2-3 years, who fully participates with this age group peers is at an appropriate developmental level. Inversely a 10 year old with intact intellectual skills, **who** is unable to name a best friend is not at an appropriate developmental level.

The third criterion is “a lack of spontaneous seeking to share enjoyment, interests, and achievements with other people”. For example a child delighted to see his favorite thing might not be able to **express** it. The ability to show objects of interests to others typically develops **during** the first year of life and its absence is one of the earliest symptoms of **autism**.

The fourth criterion is “the lack of social or emotional reciprocity”. This means that a child in a conversation may lack the sense of realization that whether his audience is interested in this one-sided conversation, or getting bored by

it. Conversely a person with Autism may prematurely end a social interaction. This means that the child may have trouble maintaining social interactions, even pleasurable ones.

Verbal and non verbal communication

There are 4 criteria under the category of impairment in communication. The first criterion is "delay in, or total lack of the development of spoken languages," that is not compensated by the use of gestures or other forms of communication. Delay in language development as defined by DSM-IV, is a failure to develop single words by 2 years of age and short phrases by 3 years of age. In determining when language development occurs, it is important to distinguish between babbling and the use of a sound to indicate a particular object or person. Autistic children often develop the ability to use words to refer to objects / people. In some cases if the language is not absent it is deviant. Such children often begin to speak the first words on time and then suddenly stop talking between 2-2½ years of age.

The second criterion in individuals with adequate speech is "marked impairment in the ability to initiate or sustain a conversation with others." Autistic people often find it difficult to choose a topic for conversation, which might be interesting for the audience. Such people might have extensive vocabulary, and use it in a monotonous speech, but might be unable to hold simple conversations.

The third criterion is “stereotyped and **repetitive** use of language or idiosyncratic language.” They like to follow a **strict** and rigid routine. Unusual aspects of language including immediate **echolalia**, delayed echolalia, pronoun reversal, and metaphoric speech **are included** under this criterion.

The fourth criterion is “lack of varied, **spontaneous**, make believe play or social initiative play appropriate to **developmental** level.” Some of the Autistic children might never involve in pretend **play**, while others may insist on playing such games in their usual rigid patterns. It is important to examine a child's play with their developmental level in **mind**. Children with Autism have difficulty imitating another person's motor **movements**, even though their verbal imitative abilities can be quite good.

Restricted repertoire of activities and interests

This criteria involves observably deviant and **absent** behavior. The first criterion is “encompassing preoccupation with one or more stereo **typed** and restricted patterns of interest that is abnormal **either** in intensity or focus.” Autistic children might often learn vast amount of information on any topic by memorizing facts and conversing mainly on those **topics**. While playing, such children may play or focus on only certain toys, or they would draw the attention on certain unusual objects. The second criterion is “apparently

inflexible adherence to specific non functional routines or rituals." They like to stick by certain rituals and routines which on changing might show apparently on their behavior. The third criterion is "stereotyped and repetitive motor mannerisms." Body movement such as rocking, hand flapping, spinning or head banging is common especially among younger and lower functioning children. The fourth criterion is "persistent preoccupation with parts of objects." Children with autism may persistently smell their toys, play with toy trucks only by repetitively spinning their wheels, or be obsessed with looking at parts of objects such as door hinges, or table tops.

The autistic spectrum disorder is a heterogeneous group of neuro behavioral syndromes characterized by major impairments in basic social relationships, abnormal language developments, limited or non-existent imagination and extremely rigid patterns of behavior. The term spectrum implies a range of severities from mild, allowing close to normal function in many areas, to the most severe, in which social function appears to be impossible. But there are always deficits in the "core triads" of socialization, communication and imagination, and restricted behavior. The core triads are:

Qualitative impairments in social relationships:

From the start, typically developing infants are social beings. Early in life, they gaze at people, turn towards voices, grasp a finger and even smile. Autistic children in contrast have limited or non-existent interest in, or desire to socialize with others. They have tremendous difficulty in learning to engage in

the give and take of everyday human **interaction**. Even in the first few months of life, many do not interact and avoid **eye** contact. They seem **indifferent** to other people and often seem to prefer **being** alone. They may resist **attention** or passively accept hugs and **cuddling**. Later they seldom seek **comfort** or respond to parents' displays of **anger** or **affection** in a typical way. Research has suggested; although children with **ASD** are attached to their parents, their expression of this attachment is **unusual** and difficult to read. In an 'infant interactive game session', a shy child **may** hide and refuse to join a group; where as an autistic child seems **completely** unaware of the group and **does** not respond to it. The autistic child is **described** as "socially aloof", who **often** ignores other people and is unable to **distinguish** between people and **objects**. Interactions initiated by the child **serve only** to achieve child's **immediate** wants and needs rather than to make **friends** or play. Play is typically solitary, and often repetitive and restrictive to a **single** type of object or activity.

Subtle social clues, whether a smile, a **wink** or a grimace – may have **little** meaning. They are unable to wave, **imitate**, or smile responsively. They are also unable to interpret gestures or **facial** expressions. To add on to the problem, people with ASD have difficulty **seeing** things from another **person's** perspective, where in most five year olds understand that **other people** have different information, feelings and goals, than they have. A person with ASD lags such understanding. They also have difficulty regulating their emotions. This can take the form of immature **behavior**, such as crying in class, or verbal outbursts that seems inappropriate to those around them. They might

be disruptive and physically aggressive at times making social relationships still more difficult. They have a tendency to "lose control," particularly when they are in a strange or overwhelming environment, or when angry and frustrated. They may at times break things, attack others, or hurt themselves. Behaviors of rocking and hand flapping are common to them.

Communication and language problems:

One of the most striking characteristics is the uneven profile of language and cognitive abilities. By age three most children have passed predictable milestones on the path to learning language; one of the earliest is babbling. By the first birthday a normal child says words, turns when he hears his name, points when he wants a toy, and when offered something distasteful makes it clear, the answer is 'no'. Some children diagnosed with ASD remain mute throughout their lives. Some infants who later show signs of ASD, coo and babble during the first few months of life but they soon stop. Others maybe delayed, developing language as late as age five to nine.

It would generally be assumed that in learning a language the child would necessarily be learning to communicate. Separate teaching of pre linguistic communication skills might occur as the first step to language teaching, or there might be separate communication skills taught to those considered incapable of benefiting from language teaching (speech or sign). But it is generally assumed that lack of communicative ability stems from the lack of

means to communicate. For autistic **children** no such assumption can be made. Autistic children may have a **language** handicap that varies from muteness, accompanied by an inability to **sign** or gesture, to apparently **full** grammatical speech whose abnormality **may be** difficult to detect. Yet **even** those with apparently the fullest **competence** suffer the same **underlying** disability as the most severely **linguistically** disabled lacks, of full communicative competence. The autistic **child** may have a language, or maybe taught one, but will still be unable to **use** it **effectively** to communicate and, perhaps more importantly, still **have** problems understanding the communication attempts of others.. Fifty **percent** of autistic individuals remain without effective speech, but acquiring **language** does not solve the communication problems-whether spoken or **signed**.

The problem is not one of a language or **speech** difficulty as such, so the solution does not lie in simply devising **ways** of teaching the **child** **language**; whether speech or sign. The approach is **one** of helping the child to learn to communicate by helping his social **understanding**; his understanding of himself in relation to other people. **Language** is not a unitary skill. **Spoken** language is a system consisting of a set of **rules** that apply to four **broad** areas: -

Phonology- rules, for combining speech **sounds** to form words and phrases.

Grammar- this includes syntactic rules for **combining** words into sentences and morphology rules for the use of **prefixes** and **suffixes** to word roots.

Semantics- the rules for the coding of meaning in both words and sentences.

Pragmatics- rules for the selective use and understanding of speech according to context.

Autistic children may have problems with all these aspects of language (as the large number who remain mute, show) but their main linguistic handicaps are in the areas of semantics and pragmatic communication. When speech does occur, phonological and grammatical rules tend to follow normal development. Semantic and, even more especially, pragmatic communication on the other hand, develop abnormally and are likely to remain underdeveloped and bizarre. Thus autistic children have problems in making sense of spoken language or signs, gestures, body posture, eye-gaze, facial expressions and in fact all verbal and non-verbal communicative exchanges. They may understand and be able to use all the words or signs in isolation or in grammatical structures; but still not be sure how to initiate, maintain and finish a conversation. They may never understand how polite idioms relate to questions or comments (e.g. "can you pass the salt?", is not generally meant as a question about the listener's capacity), including any knowledge the listener can be assumed to possess already, and so much more. The term pragmatics is hence the appropriate use of language in a particular interactive or social context. For a long time (even beyond infant school age) children use the context to make sense of any language they hear. There is a semantic language community of conventional shared meaning. An autistic child may insist that the words mean what he or she wants them to mean, but

that's not how language works. It is more **important** for autistic children to learn to have shared experiences with **others**, through which language can develop its meaning. Such changes in **complexity** of vocabulary and grammar, sentence length, use of slang, **idiom** or terms of respect and affection; and loudness and inflection **of** voice are usually made unconsciously and failure to make such **changes** makes one's audience uncomfortable. A severe deficit in **pragmatics** can be identified in autistic people even if their expressive language **is otherwise** perfect. In spoken language sounds (words) become symbols **for** objects and ideas. A difficulty in using or understanding symbols **maybe one** of the basic psychological impairments of autism. This is expressed **in the** lack of imagination which maybe almost complete, and which is **responsible** for some of the most serious social and adaptive difficulties **with autistic**. While it can be hard to understand what ASD children are saying, **their** body language is also difficult to understand. Facial expressions, **movements** and gestures rarely match with what they are saying. Also their tone of **voice** fails to reflect their feelings. A high- pitched, sing- song, or flat. robot like voice is common. Some children with relatively good language skills speak **like little** adults failing to pick up on the 'kid-speak, that is common in their peers.

Pronoun reversal:

This is one of the most profound problems in regard to the speaker-addressee relation in autism ('I' / 'me' / 'you'). The term pronoun reversal is indeed a wrong term, more commonly children with autism do not use the first

person pronoun, rather they use 'you' or even the third person pronoun ('he' or 'she'). This is so because, these are the terms that are used to refer the child, or the child has learnt about himself. So in confusion these are the terms that he uses for himself, and so he comes to adopt this strategy both in self-reference and to refer to others. Some researches say that the problem does not lie in the lack of differentiation between self and other, rather pronominal expressions like 'I' and 'you' refer not to individuals but to roles within a conversation structure. Children with autism have little understanding of the need to indicate conversational roles and are thus unlikely to use 'I' until they learn to do so as a rote form, since 'I' serves a purely indexical function of 'the one who is speaking'. Since they are also severely delayed in engaging in the kinds of pretend play in which social roles are taken, they will have less opportunity to use and practice such forms as part of imitated speech patterns.

The confusion over 'you' is more profound and more clearly related to difficulty in understanding mental states. 'You' refers to an addressee, who may or may not be physically present. Hence explicit teaching of the reference for 'you' is required to help children with autism resolve this problem.

Echolalia:

Normal children from an early age, pay attention to speech sounds more than to non-speech sounds or noise. The autistic child in contrast is more attentive

to non-speech sounds. Expressive **language** is not simply delayed in **autism**; it seems to follow an abnormal or **deviant** developmental path. They seem unable to combine words into **meaningful** sentences. Some speak only **single** words, while others repeat the **same phrase** over and over again. ASD children parrot what they hear, a **condition** called echolalia. The child may repeat words or phrases just heard, **but** not understood, called **immediate** echolalia, or may suddenly repeat a **sentence** heard a day or two before, called delayed echolalia. Immediate **echolalia** seems to reflect the child's difficulties in processing verbal **information**; delayed echolalia is an example of their unselective memory which **often results** in complete recall for trivial experiences without any ability to filter or **priorise** memory traces. The child may also utter particular words or **phrases** repetitively and compulsively without attaching any meaning or **social significance** to the words used. Words used to describe feelings cannot be learnt or understood. All children employ repetitive questioning to attract and maintain adult attention to achieve a better explanation or response to a request or to reduce anxiety, but autistic children may ask the same **irrelevant** or inconsequential questions for hours or days on end.

TYPES OF AUTISM

Within the broad autistic spectrum various **other** pervasive developmental disorders are recognized. Experts disagree as to the true relationships

between these various divisions of the spectrum, and the precise definitions employed are changed over time to accommodate new knowledge or understanding. It is likely that multiple genes are involved in different combinations causing slightly different clinical syndromes. The diagnostic terms now in use may be substantially different in ten or twenty years as researchers are constantly identifying apparently new clinical syndromes and sub-types and dividing the autistic population in many different and innovative ways.

Early infantile autism

Often referred to as Kanner-type or classical autism, this represents the full-blown syndrome against which other varieties are measured and is fully described above. When the term "autism" is used alone this type of autism is to be understood. In the DSM-IV nomenclature autism is a pervasive developmental disorder but not all pervasive. Autism may co-exist with mental retardation syndromes such as Down syndrome and Williams syndromes, and with multi-sensory impairments. Mental retardation is found in most cases of autism; the exception are sometimes described as "high functioning autistic" and there is some controversy as to the distinction between high functioning autistic and Asperger's Disorder.

Asperger's Disorder

DSM-IV allows diagnosis of Asperger's Disorder if the criteria for autism are fully met in regard to qualitative social impairment restricted, rigid and stereotypic behavior patterns, but not those for severe communicative impairment. Language milestones are not delayed, so the impairment in language is qualitative rather than quantitative, and speech is superficially normal. However, subtle delays in language development should not exclude the diagnosis; and many children followed for mild autism in the early years and observed to have evidence of a developmental language disorder, later show typical features of Asperger's. Individuals with Asperger's disorder will have normal intelligence but this does not exclude severe incapacity and inability to function in society, so that the term "high-functioning" is relative and generally unhelpful.

The most widely accepted features of Asperger's are autistic social impairment allied with all-absorbing narrow interests and a need for routine, which the patients impose on themselves and others. Language pragmatics is severely impaired and speech is generally very concrete or literal and pedantic. While there is no difficulty understanding the meaning of words, these children have real difficulty understanding what somebody talking to them means by the words they use. The voice is expressionless and prosody, the normal use of emphasis, rhythm, and pitch to reinforce meaning

and feeling, is absent. Impaired higher language function interferes with appreciation of humor, metaphor or sarcasm. The individuals are generally clumsy and this may be a presenting feature.

Rett Disorder

Rett syndrome is a degenerative disorder, which affects mostly females and usually develops between ½ to 1½ years of age. Some of their characteristic behaviors include; loss of speech, repetitive hand wringing, body rocking, and social withdrawal. Those individuals suffering from this disorder may be severely to profoundly retarded.

Fragile X syndrome

It is a form of mental retardation in which the long arm on the X chromosome is constricted. Approximately 15% of people with Fragile X syndrome exhibit autistic behaviors. These behaviors include; delay in speech/language, hyperactivity, poor eye contact, and hand flapping. The majority of these individuals function at mild to moderate level. As they grow older, their unique physical facial features may become more prominent (e.g., elongated face and ears), and they may develop heart problems.

Laudau- Kleffner Syndrome

It exhibits many autistic behaviors such as social withdrawal, insistence on sameness and language problems. These individuals are often thought of as

having 'regressive' autism because **they** appear to be normal until **sometime** between ages 3 and 7. They **often** have good language skills in **early** childhood but gradually lose their **ability** to talk. They also have **abnormal** brain wave patterns, which can be **diagnosed** by analyzing their EEG **pattern** during an extended sleep period.

Current Biological theories of causation

Today it is commonly accepted that **autism** is a neurobiological disorder **that** is present at birth, or develops within **the** first 30 months of life. After almost two decades of research, the precise **causes** of autism remain unclear. The research on biological causes of autism **has** been fraught with **contradictory** and disappointing results; findings are **rarely** replicated and often do not add up to a coherent explanation. There **are** several clues concerning the underlying brain dysfunctions in **people** with autism, and the **methods** by which these brain dysfunctions may be **transmitted**.

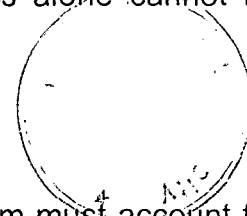
Genetic Findings

Genetic research has provided some of **the** strongest evidence, that autism is a biological disorder. Same-sex twin **studies** have compared the concordance rates of autism, between monozygotic **and** dizygotic twin pairs. If genes are completely accountable for autism, one **would** expect a 100% concordance

rate for autism in monozygotic twins. That is, since both twins share the same genetic codes, the expected concordance rate for autism would be similar to the concordance rate among all siblings.

Several epidemiological same-sex twin studies have examined the genetic component involved in autism. Across these studies, concordance rates for autism in monozygotic twins have ranged from 36% to 91% (Bailey et al., 1995; Folstein & Rutter, 1977; Steffenburg et al., 1989). None of these studies could have a single pair of dizygotic twins concordant for autism. The fact that these studies showed a much greater concordance rate among monozygotic twins strongly suggests some genetic factor underlying autism. Because concordance rate for monozygotic twins is less than 100% in all of the studies, however, we can also assume that genetics alone cannot be responsible for autism.

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Any theory about the genetic abnormality underlying autism must account for the heterogeneity of the disorder. Individuals with autism can have very different clusters of symptoms, that might range from mild to severe. For example, one child with autism can have mental retardation and mutism, and may actively avoid interacting with others. In contrast, another child with the same autism diagnosis may have above-range intelligence and fluent speech and may actively seek friendships, though oddly.

There are two different genetic theories that seek to account for the heterogeneity seen in autism. First is the notion that there may be a more general genetic abnormality that impairs cognitive and social functioning with autism representing a particularly severe form of this genetic problem. This theory can help account for the different levels of severity seen in people with autism. Second, there may be a variety of genetic disorders that cause autism, each characterized by a slightly different array of symptoms, but all leading to the impaired social relationships, communication skills, and preservative behavior, characteristic of the disorder.

The fact that autism co-occurs with known single disorder such as fragile X syndrome, phenylketonuria (PKU), and tuberous sclerosis supports the notion that autism may be a single disorder that can be caused by multiple gene abnormalities.

Prenatal and Perinatal Complications:

Two factors suggest that there may be an environmental, as well as genetic link to autism. First, because monozygotic twins are not always concordant for autism, there may be an additional environmental insult that leads to one twin having autism but not the other. Second, if there is a genetic abnormality that causes social and cognitive impairments, then there must be an additional factor that determines whether the impairments will be mild or

severe. It has been hypothesized that pre-and perinatal complications, when combined with a genetic factor may lead to the development of the severe social and cognitive abnormalities that characterize autism.

Compared to their siblings and normally developing children autistic children have more pre-and perinatal complications. A recent study of children with autism who are not severely retarded, however, has shown that their mothers also have increased rate of pregnancy complications (Lord, Mulloy, Wendelboe, & Schopler, 1991). Therefore, mental retardation cannot completely account for the link between autism and pre and perinatal problems.

Unfortunately, the literature has been contradictory and few specific pregnancy complications have been corroborated across multiple studies. The most common problem reported by mothers of autistic children are increased maternal age (greater than 35 years), bleeding after the first trimester, use of prescription medication, meconium in the amniotic fluids, and gestational period longer than 42 weeks (Lord et al., 1991; Tsai, 1987). It is important to note, however, that many women have these complications during pregnancy without having a child with autism. Similarly, many mothers of autistic children do not experience these, or any other, complications during pregnancy. While many women believe that a particular pre- perinatal complication is responsible for their child's autism, currently there is no proof that any specific complication causes autism.

An environmental factor that is associated **with** autism is birth order. Autistic children are more likely to be born first in **two-child** families or fourth or later in families of four or more children.

Neuroanatomical Findings

Researchers have theorized that autism **may** be caused by abnormalities in brain development. Through the use of **magnetic** resonance imaging (MRI), computerized tomography (CT) scanning, autopsy studies, and animal models, several different areas of the **brain** have been implicated. Recent research has demonstrated abnormalities in **three** areas of the brain; the cerebellum, the limbic system, and the **cerebral** cortex. In addition, there has been some evidence suggesting an overall enlargement in brain size in autism rather than a specific localized impairment.

Cerebellum

The cerebellum is connected to systems **regulating** attention, sensory modulation, and motor and behavior initiation. In addition, the cerebellum is known to be linked to emotion-modulation and language-processing systems. Each of these systems has been theorized to **be** impaired in individuals with autism.

Support for anatomical abnormalities in the cerebellum of autistic individuals come from autopsy and MRI studies. Two different research groups have reported autopsy results indicating a reduced number of Purkinje cells in the cerebellar hemispheres (Bauman & Kemper, 1988; Ritvo et al., 1986). MRI studies have corroborated the autopsy findings. Courchesne and colleagues reported that the cerebellar vermal lobes VI and VII are considerably reduced in size in persons with autism. The majority of the participants in the MRI studies had intellectual abilities within the average range caused by the mental retardation that often accompanies autism.

It is believed that the cerebellar hypoplasia is caused by a lack of development during the prenatal period (most likely during the late second and early third trimesters of pregnancy). This theory has been supported by two sets of findings. First, the cell loss has been observed in young children with autism (Hashimoto, Tayama, Murakawa, & Yoshimoto, 1995). Presumably the fact that this anatomical abnormality is present early in life indicates that the degeneration does not occur, and instead the abnormality is present from birth. Second, if the degeneration process followed a period of normal development, one would expect that abnormal anatomical pathways leading into or out of the cerebellum would cause the degeneration. Instead, the cell loss seems specific to the cerebellum (Hsu et al., 1991)

Although these findings of cerebellar cell loss have been exciting and led some to hope that the underlying cause of autism had been found, this

biological marker does not appear to **be present** in all individuals **with autism**. In fact, several researchers have **reported no cerebellar abnormalities in MRI** (Kleiman, Keff, & Rosman, 1992).

Limbic System

There is some empirical evidence for **limbic system abnormalities** in persons with autism. The social skill deficits **observed** in individuals with autism have been theorized to reflect **abnormal functioning** in the limbic system. Autopsy studies have revealed reduced neuronal **cell size** and increased cell-packing density (increased numbers of neurons **per unit volume**) in portions of the limbic system (i.e., the hippocampal **complex**, entorhinal cortex, amygdala, mammillary body, medial skeptical nucleus, **and** anterior cingulated gyrus) (Bauman & Kemper, 1985). It is not **known** if the limbic system damage occurred during pre-, peri-, or postnatal **development**. In contrast to the autopsy studies, a recent MRI study **has not found** any evidence of abnormalities in the hippocampus (Saitoh, Courchesne, Egaas, Lincoln, & Schreibman, 1995).

The cerebral cortex

The cerebral cortex regulates higher-order **cognition**, including language, abstract reasoning, and planning. Because each of these abilities is impaired in autism, it has been hypothesized that abnormal development of the

cerebral cortex may be an underlying causal factor in autism. Surprisingly, in the past few years, only two MRI studies have been published citing cerebral cortex damage in persons with autism. They hypothesized that these types of malformations resulted from a defect in the migration of neurons to the cerebral cortex during the first 6 months of prenatal development. Because their subjects did not have mental retardation, their data could not be attributed to the mental retardation that often accompanies autism. While these findings suggest that autism may be associated with global developmental problems in the brain, the lack of specificity makes it difficult to theorize how this type of impairment would lead to the specific set of behaviors observed in autism. This finding needs to be replicated in order to verify the connection between cerebral cortex abnormalities and autism.

Brain size

Several researchers have noted an increase in total brain volume in some individuals with autism (Piven, Arndt, Bailey, Havercamp, Andreason, & Palmer, 1995). In normal brain development, there is an overgrowth of neurons that are pruned during the first few years of life. It has been theorized that the large brain size in autism may indicate that this normal pruning does not occur in some individuals with autism (Minshew, 1996). As with the data on cerebral cortex abnormalities, this finding of global brain impairment in

autism does not readily suggest **why** the specific social, language, and cognitive impairments observed in **autism** result from this abnormality.

Others

A dysfunctional immune system has **also** been associated with **autism**. It is thought that a viral infection or an **environmental** toxin may be **responsible** for damaging the immune system. **There** is also evidence of a **genetic** association to a compromised immune **system**. Researchers have found that many autistic individuals have a **decreased** number of helper t-cells, which help the immune system fight infection.

There is growing evidence that the gut **or intestinal** tract of **autistic children** is impaired. Researchers have **documented** yeast overgrowth (candida albicans), low level of phenyl sulphur **transferase**, and measles virus in their intestinal tract.

CHAPTER 2

METHODOLOGY

The aim of my research has been to analyze and describe the verbal behavior of the cases under study. This verbal behavior is observed at the syntactic level. By syntax here, I don't mean the literal "ordering together", or putting together of words in order to make larger units; or the science of sentence construction, keeping in mind certain rules; but a lexicon, or a set of lexicons that is just enough to enable communication process, and which convey the meaning and intention. To observe their communication pattern it was important to assess the autistic children so as to know the severity of their disorder and place them at the right position on the disorder spectrum. To obtain useful assessment information, it was important to understand the implications of Autism on learning, thinking, communication and behavior. Hence appropriate assessment tools were prepared to have as output, the maximum behavioral and verbal responses, which were further needed for interpretation.

In the Indian environment a child is symptomatically diagnosed and on this basis his functional assessment is done. For the purpose of

diagnosing a child for autism there **are a series** of test batteries. Some of these test batteries are:

DSM IV, - is the Diagnostic and **Statistical Manual (IV)**. The task force appointed by the APA (American **Psychiatric Association**) to develop DSM IV, endeavored to strike a **balance** between sensitivity and specificity. They wanted to lower **the rate** of false positive diagnosis, without raising the rate of false **negative diagnosis**. DSM IV, eliminates low frequency or redundant criteria **so as** to have a shorter and less detailed list, as compared to the **other test batteries** before.

- A) A child should have a total of six (**or more**) items from (1), (2), and (3), with at least two from (1), and one **each from** (2) and (3) to be autistic:
1. Qualitative impairment in social **interaction** as manifested by at least two of the following.
 - (A) Marked impairment in the use of **multiple** nonverbal behaviors such as eye-to-eye gaze, facial expression, **body** postures, and gestures to regulate social interaction.
 - (B) Failure to develop peer **relationships** appropriate to developmental level.
 - (C) A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest).

- (D) A lack of social and emotional reciprocity.
2. Qualitative impairments in communication as manifested by at least one of the following:
- a) Delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through. Alternative modes of communication such as gesture or mime).
 - b) In individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others.
 - c) Stereotyped and repetitive use of language or idiosyncratic language.
 - d) Lack of varied, spontaneous make-believe play or social initiative play,
appropriate to developmental level.
3. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:
- Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus.
- Apparently inflexible adherence to specific, nonfunctional routines or rituals.
- Stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements).

Persistent preoccupation with parts of objects.

- B) Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic of imaginative play.

CARS

(The childhood Autism rating scale) (Schopler, Reichler & Renner 1998) is a behavior rating scale that can be completed by the child's teacher, parent or therapist. The child's behavior in 15 different areas (eg. social relatedness, nonverbal communication, verbal communication) is rated on a four point scale, ranging from age appropriate behavior to severely abnormal behavior. Diagnostic classification are made by adding up the scores for the 15 different areas. An advantage of this behavioral rating scale is that it can be completed by a variety of different individuals who are familiar with the child, and does not require an extended structured observational period. It also includes associated features of autism such as unusual sensory responses and fears.

These are the other test batteries that are used, but not so in the 5 cases I have studied.

ADOS

(Lord et al., 1989) the Autism diagnostic observation schedule is a standardized semi structured play session that allows the examinee to

observe communication and social behaviors that are associated with autism.

PL – ADOS:-

(Dilavore, Lord & Rutter 1995) The prelinguistic Autism diagnostic observation schedule was developed as an alternative to the ADOS to use when a child is less than 6 years old and has not yet developed phrase speech it is a semi structured 30 minute play assessment consisting of 12 activities assessing reciprocal social interaction, imitation, pretend play, turn taking, ability to offer comfort to another person, and requesting skills.

PIA

(parent interview for Autism) (Stone Hogem, 1993) is a structured interview for gathering information from the parents of children under the age of 6 parents are asked to rate the frequency of behaviors associated with autism on a fine point scale ranging from never to almost always. The interview contains 118 items and requires 30-45 minute to administer.

ADI-R

(The Autism diagnostic interview revised) is a standardized semi structured parent interview that can be used to assess children and

adults with a mental age of 18 months and up (Lord, Rutter, & Le couteur, 1994)

ICD-10 International classification for diseases. Tenth edition.

The Autistic behavior composite checklist and profile (Anita Marcott Riley 1984) which is comprised of 148 items classified within the following eight categories:

- a. Pre requisite learning behavior.
- b. Sensory perceptual skills (visual, auditory, tactile, kinesthetic....)
- c. Pre language skills.
- d. Speech language and communication skills.
- e. Developmental rates and sequences.
- f. Learning behaviors.
- g. Relating skills.
- h. Motor development.

After confirming the autistic disability of the subjects, the main purpose of the study comes and henceforth the patients will be subjected to another set of questionnaire to learn where can they be placed on the autistic spectrum. Once we know their severity and where they are placed, we can moved ahead for further study and analysis. This elicitation would be on he basis of spontaneous speech, reading aloud.

repetition, writing, observations and interviews of both parents and teachers. It is important to interview both the parent and the teacher since they are the prime sources of information about the child's development and functioning, and interviewing them would make the assessment more fruitful. They help us know how the child performs under a broad range of environments.

I have recorded spontaneous speech with the help of a tape recorder, and the data is then transcribed. I have tried to observe their syntactic process. This was basically done to observe the omissions done by the subjects of the major grammatical processes namely, conjunctions, prepositions, gender, word order and tense. Also their use of lexicons for the purpose of communication. Once we get to observe these syntactic constructions, it is easier to look into their process of communication. In some cases, the length of a sentence would be minimized to one or two lexicons. With such constructions I have tried to see if they are object oriented, having a noun, or action oriented having a verb. I have then tried to look into what other syntactic copulas are added to it to complete their phrases. The questionnaire sample for this purpose is an adaptive version from project QUEST inservice manual. The following questions are designed to obtain information about the ways in which an autistic child communicates.

Expressing feelings

How do you know when your **child**:

1. Likes an activity, food, or **other**?
2. Does not like an activity, **food or other**?
3. Feels good or happy?
4. Feels ill or in pain?
5. Is Hungry?
6. Is anxious or afraid?

Requesting

How do you know when your child:

7. Wants attention?
8. Wants more of something?
9. Wants you to continue an **activity** (for example, playing a game or rocking)?
10. Wants you to stop an activity?
11. Wants help?
12. Wants something to eat?
13. Wants something to drink?
14. Wants a certain object?
15. Wants to use the bathroom?
16. Wants affection?

17. Does your child make a choice between several objects when the objects are _____ presented or in view?

18. Does your child make a choice of an activity or object when the possible selections are not presented or in view.

19. How do you know when your child does not understand something that someone has said? (Does your child ask for a clarification by saying "what?" or "I don't understand" or by doing something like self-biting. Describe.)

20. Does your child ask for information (for example where someone is, where someone lives, or when a birthday or holiday will occur)? Describe.

21. Does your child ask the same questions again/repeatedly?

22. Does not want to do something or wants to stop doing something? Describe.

23. Does not want a specific object or food? Describe.

Protesting

24. Not allowed to do or have something desired? Describe.

25. A desired object is taken away? Describe.

26. The environment or routine is changed? Describe.

Responding

27. Verbal directions.

28. Questions that begin with " what, who, where, when, how or why"

29. Questions that call for a 'yes' or 'no' answer.

Acknowledging Others

30. How does your child greet you or **others** without direction?

31. How does your child respond **when greeted** by others?

32. Does your child uses polite words **such** as ("thank you", "please", and "excuse me") appropriately without **prompting**? Describe.

Commenting

33. Does your child comment about **himself** and his own activity? Describe.

34. Does your child comment about **other** people or their actions? Describe.

35. Talk about events that happened **in the** past or will happen in the future? Describe.

Communicative Language

36. Does your child talk to himself **about what** he is doing, is going to do (for example, "sit down" as he sits **down**) or is not supposed to do (for example, "don't touch" when **beginning to touch** something that is off limits), as if repeating a rule? Describe.

This questionnaire is used to guide **interviews with** parents and teachers who know how the individual actually **communicates** in many situations and under many conditions.

The results of this questionnaire are then **studied** to know about

Speech

One word

Two or three words

Complex utterance

Combined forms

One word

Two or three words

Complex utterance

Echolalia

Immediate: exact

Immediate: mitigated

Delayed

For the selection of cases for my study. I did random sampling of almost 12 autistic children on the bases of their verbal capacity, that is they should be verbal autistic. They were put under test with the help of DSM-IV, and CARS test batteries to know what is their position on the spectrum ranging from mild to severe.

This random sampling was brought down to 5 autistic cases. The criteria for this select sampling was:

1. The age of the children preferably the age bracket of 7-13 years, so that I get similar kind of linguistic responses, which would be age appropriate.

2. Their linguistic competence, ranging from a single lexicons to a set of lexicons and small phrases.

3. Availability of cases.

For the autistic children language may not be a problem but to communicate with others might be one. The results gained from the above questionnaire would be helpful in knowing the syntactic output for the purpose of communication, both in terms of single word outputs or syntactic outputs.

But eliciting data from an autistic child is a tough task. This is so because the autistic children frequently demonstrate problems with pre requisite learning skills, such as sitting, eye contact and attending classroom sessions. Often prompts are needed to maintain in seat and on task behaviors. The autistic student is frequently distractible because of either self-stimulation or environmental stimulation. Hence from autistic children only spontaneous data is collected for data analyses. They can never reply to a set of questions already framed.

CHAPTER 3

CASE STUDIES

CASE 1

EMERGING SKILLS

Imitation: He can imitate activities done by another person, i.e., he can imitate the exercises like 'bend and touch floor' and tries to imitate 'bend to the right' and 'bend to the left' type of exercises. He tries to imitate some drawings like a circle, a line, etc.

Gross Motor Skills: He can very easily shift objects from one hand to the other. He can lock and unlock the doors (by pulling the latch). He can lift weight of about five kilograms. (e.g., five kilograms 'atta'). He climbs up and down the stairs appropriately (alternating steps). Sometimes while climbing the stairs or coming down he places both feet on one stair. He makes an effort to climb an elevated path (the look of the tree at an angle 180-85 degree). He can throw a ball at a distance of two feet. At times he tries to catch the ball with great effort. He can kick the stationary ball but is still learning to kick the moving ball. He can jump very easily on both his feet. He bends very easily to go under the table but finds it difficult to go through a tunnel.

Fine Motor Skills and Eye Hand Coordination: He has quite good fine motor skills. He can screw **nuts & bolts**, and bottle caps. He **does hold** pencil/bold marker with his **finger grip** but needs his wrist to be held tight to enable him to write He is learning **to hold** scissors to cut paper. He is learning to color within the designated area.

Cognitive

Maths: He knows numbers by rote, **till thirty**. He can write the number name to its numeral and vice-versa from 1-9. (e.g: 1-one). He can do **worksheets** with numbers - x like, before, after, **put in** missing numerals.

He can do addition of simple **digits till 9**. He is learning to do **subtraction** of single digits till 7. He can also do **simple** statement sums both on **addition** and subtraction. He is learning to **recognize** coins (50p, Re1 coin & Rs2 and Rs5 coins).

He can look at the clock drawn, **read the time** and circle or write the **correct** answer. He also knows the numbers **and** numerals from 1 to 9. e.g: 1-one; three-3. He can also recognise numbers on a dice.

General : He knows the upper and lower case of alphabets and is also able to write the opposites, e.g.: if 'A' is given and next to it 'a', 'd' 'e' are there, he can circle the correct answer and vice-versa.

He knows the body parts e.g.: 'eye' 'nose' and the functions of the five sense organs. He also knows the different sounds and movements made by animals, like, 'dog – barks' and 'snake-crawls'. Here either he picks the correct slips between 2-3 choices or circles the correct answer. He knows categorization of fruits, vegetables, animals, what he eats and drinks. To write, he still needs the pressure on his wrist. He can write 2-3 sentences (with pressure on his wrist) about a picture, say of a house, or an apple.

Reading: He can read sentences likes- This is a _____ or 'This is a _____. Answer (tree, apple, fruit).

He can either complete the sentence by circling the correct answers or filling one words. He can read instructions like 'Draw a circle', 'Circle the correct answer' and 'fill in the blanks'.

Behavioral Communication

Communication: He can use words like 'water' and 'toilet' as per his desire. He easily reaches to get the object of his desire, if within reach.

Social Interaction: He extends his hand to say 'hello' or even says 'Good morning' with verbal prompt. He even wishes 'bye dida' while leaving home (when dida has come over to their place). During **group** activities, he waits for his turn to come.

Attention, Use of Sensory Modalities: He can attend a work session for 40-45 minutes interspersed by songs or other **fun** activities. At times, he makes a peculiar sound together with finger flapping.

Language

Receptive: He can understand and **follow** instructions 90% of the time (whether given in English or Bengali) **when** instructions are clear and **specific**. He can follow two step instructions e.g.: " **get up** and come to Ma'am" or two steps unrelated instruction e.g.: " take **the glass** and close the door."

Expressive: He does say 2-3 word **phrases** like 'baba come', 'not-at all '(not wanting tiffin), 'pepsi' (wants to drink **pepsi**) etc.

Self-Help

Eating: He can eat dry food stuff, like pieces of 'roti', 'paratha', **bread**, and some other salty snacks, independently, However, he needs prompts to have porridge and milk with 'cornflakes'. He bites banana but needs help to **peel** it.

He drinks various fruit juices and enjoys cold drinks like 'pepsi', and 'coca-cola'.

Toileting: He can indicate his need for toilet sometimes going on his own, sometimes-saying 'toilet' and at times he needs to be reminded. For big job 80% of the times, the parents are to be focused.

Interests, Preferences: He loves to listen to music and also dances to fast beats. At times he verbally wants pen & paper and scribbles on it.

Unusual Mannerisms: He has started running in circles with head tilted to one side. He does hand flapping which increases if he is very angry/irritated.

Challenging Behaviors: He sometimes throws temper tantrums on the bus terminal, if the usual bus, in which he goes home, is not there.

Response to Structure: He works very well in a structured environment with well-planned activities.

With the dual support and encouragement from home as well as school, he can now easily sit for 40-45 minutes in a work session that is interspersed with singing and other fun activities in between.

CASE 2

EMERGING SKILLS

Imitation: She can imitate drawings of blocks accurately. For example she can copy a rectangle with diagonal lines across it, but these designs are all similar to the shapes she enjoys drawing on her own.

Gross Motor: Her gross motor skills are age appropriate at the basic level. She can climb over a table, that is two and half feet high, can balance while standing on a chair, and pass through a narrow passage that is three by three feet. She can walk on an elevated path, and jump or stand on toes to retrieve an object, which is just out of reach above her head. She can catch and throw a ball. She can kick a ball at a target through a passage that is two feet wide. Sometimes she walks with a limp, but this is not due to a motor difficulty.

Fine Motor/Eye-hand Coordination: She can do very good work using her fine motor skills and eye-hand coordination. She can paste small pieces of paper on a designated area, in a pasting activity; She can pick up a pinch of salt from a spoon while cooking, and string beads of all sizes. She can color within a boundary; draw squares, rectangles, figures of girls, and flowers in pots. She can fold paper along a line, make a continuous pattern between lines, using small printing blocks, and do running stitch on a plastic net.

Cognitive Performance

Maths

Her teachers in the classroom sessions focused mainly on her functional activities, like shopping and activities that were time related. She has started to multiply single digit numbers by 2.

Reading

She can read short and simple sentences through prompts and cues.

General: This year she attended classes on the concept of safe and unsafe activities for her. She also learnt about India's population, and about differences in cultures among Indians. She learnt about the states and their capitals, and the customs, dress, food, and geographical features of the states of Jammu and Kashmir and Rajasthan too. Classes on mountains were also conducted and she worked on a project on this topic with the others in her class. She has also started working on the computer in school. She enjoys using the paint program and can move and click the mouse to make square designs and color within a boundary.

BEHAVIOURAL DESCRIPTION

Communication: She can communicate in both Hindi and English, though she prefers to speak in Hindi. If she is required to repeat in English, what she has said in Hindi (for example, when speaking to a foreigner) she needs a prompt to help her start her sentence. For example "please may....". She can express, in certain situations, what her needs or desires are. For example, she can verbally indicate to a teacher, where she wants the person to stand, or that, she wants the other 'tiffin' in her bag that has the 'salty snacks'. She spontaneously asks for certain things, like for the window or door to be opened, for food items or activities that she likes, and for going to the toilet. During sensory sessions she asks her teacher, for the small rubber balls that she likes to hold in her hand, and even indicates that she wants two balls, or the yellow one. She doesn't use many gestures when communicating, though she points to the window and door when indicating that she wants these opened. Sometimes she finds it easier to answer questions by finger choices, using the right finger.

Social Interaction: She seems to prefer female company to male company, especially if the girl is young. She prefers sitting in the corner of a room or in a space that is enclosed. For example, between the cupboards or between the doors of the red cupboard in her class. Often when a room is full of people, or she is walking through the corridors in school, she feels more

comfortable having her fingers over her eyes, or a 'dupatta' over her head. She prefers to be in class or in the play area when it is empty than when the younger children are around. She does peep through her fingers when someone greets her or says bye. She requires a prompt to verbally say hi/bye, though sometimes she spontaneously answers a greeting or farewell.

Attention and use of sensory modalities: She can attend a class for about 30 minutes, if the activity is of interest to her. Presently she seems to prefer non-academic activities to academic ones. She prefers keeping her head bowed and eyes covered when around people and when being spoken to directly, though sometimes she keeps her head up and communicates clearly, especially when the activity is one that she enjoys. For example, when she is being massaged during sensory sessions. Though she prefers to be massaged gently by another person, she is very comfortable under a strong jet of water. She has a strong affinity for water. She seems to be comfortable with both extremes of hot and cold. In winter she is comfortable standing under cold water. While cooking she can put her finger in a pan, which has hot oil in it.

Challenging Behavior: Sometimes during class she smears her saliva on the table or cupboard that is next to her. Recently she has started putting saliva on the objects that are being used in an activity and becomes engrossed in doing so. To revert her attention back to the task at hand, she

requires a prompt. She needs to be **carefully** monitored when she is cooking or stitching with a needle. She does **not seem** to be affected by very hot things touching her skin (in this case her **finger**), which is hazardous for her, and sometimes might poke someone **standing** nearby with the needle that she is using. She seems to have a **sensory** need for taking a bath, though sometimes this behavior also seems to **result** from attention seeking or escapism. In some instances this results in a battle between her and the care-giver/teacher.

She enjoys food, paints crayons, body **lotions**, etc. sometimes these items seem to bring about uncontrollable **urges** in her that lead her to do inappropriate things. For example going **through** teacher's cupboards, or taking other children's tiffin's.

Though there are still instances when she **throws** her saliva on others, or hits the smaller children, her behavior has **distinctively** decreased over time and training.

Unusual Mannerisms: She prefers to keep **her eyes** covered and her head down, especially when there is another person, or people around her. She smears her saliva on tables, cupboards, and **windows**, and sometimes even throws it on others and on objects around her.

Self help skills: She does activities like cooking (she has cooked potatoes and eggs so far), and washing dishes in the school to help her learn to be more independent. She has also been doing shopping activities.

Interests and Preferences: She enjoys painting, on paper and even whitewashes the walls in school. She enjoys being massaged gently, bathing, getting wet and playing with cello tape (wrapping it around or using it to make designs with cards). She enjoys her food, and this seems to make her enjoy her cooking activities. She seems to prefer salty food like 'funflips', 'samosas' and 'namkeens', though she also likes 'mishti- doi' and biscuits.

CASE 3

Communication

Receptive language: He responds to his name when called, e.g. during attendance he spontaneously says, "yes ma'am". Can follow 2 step instructions, e.g. "take out your lunch box and bring the mat". Can identify common objects in his environment like, Chair, Table, Music system, Computer, etc. He can recognize his arms and other body parts. Can follow instruction given by other people, like 'No', 'Stop'. Can identify different emotions on the work sheet, and in actual situations also (anger, happy, crying) he can answer questions related to "what" 'how many', "where" (with verbal prompts) with pictures and objects.

Expressive language: Can verbally **ask for** desired items, like **water, pen,** and school. He can name his **possessions** like 'Swimming bag'. **Is able to** express his emotion, by saying 'I don't **want**'.

Academics: English: Can write a few **lines**, about 4-5 on the given **picture of** animals (Elephant, Cat, Dog) with little **verbal** prompts. Can answer **Question** related to a given picture like (What, **Where, How** many, Which color). He can write 5-6 lines by himself in the fill in the **blank** form. Can write names of **five** animals, fruits, vegetables and colors. Can **answer** questions related to **traffic** lights. For e.g., "what is the color of the **stoplight**?". Has the concept of 'in/ under / on', in the picture. Solves **crossword** puzzles related to opposites, body parts

Reading: Can read 2-3 three lines **sentences** e.g. this is a bag, its color is blue with a picture and answer questions **related** to a given picture.

Concept: Has concept of long/short, big/ **small**, up/down, hot/cold, boy/girl, on /under, wet /dry.

Maths: Can do triple digit addition with carry over on his fingers. He is good with numbers. Can do double-digit subtraction. Can write tables till 20. Can do simple division, sums and double-digit multiplications with help. Can write

numbers in words till 50. Can do problem sums related to addition, subtraction, and multiplication. Can tell yesterday, today, and tomorrow on the calendar.

Money: Can recognize Re. 1, 2, 5, 10, 20, 50, 100, and 500. Can go to the market and ask for the desired items, but doesn't give the exact amount.

Time: Can tell time by an hour, $\frac{1}{2}$ hour, 45 minutes on the worksheet, and one hour and $\frac{1}{2}$ hour on the actual clock.

Self help skills

Toilet: Can indicate his toilet needs but doesn't say the exact word 'toilet', also goes to the toilet independently, washes hands with soap independently.

Dressing: Can button his shirt in sequence independently when placed in front of him. He repeats and points the area, which is dirty, with verbal prompts, can stock his cloths in the cupboard with visual clues.

Cooking: Can identify vegetables like cucumber, onion, potato, lemon, tomato, and carrot. Can cut vegetables and make simple sandwiches, and pizza with visual schedule.

Music dance drama: Sit in music class for 10-15 min in the group of 5-7 persons. Imitates simple actions but doesn't sing along.

Participates in dance sessions and imitates 2-3 steps. Enjoys dance classes. Participates in a group of 4-5 people. Enjoys hand activities and body movement activities.

Art and Craft: Can color a given picture with lines. Can draw simple recognizable forms by himself (sun, trees, house, flower etc.). Can draw straight lines using a scale. Can cut on a given line. Can fold the paper in 2-3 folds.

Responsible Behavior: He is able to put his things in (pencil; box; copy, and lunch box) in his bag with reminders. Follows a given visual schedule. But needs constant reminders.

Play: He is able to play simple board games ('Ludo', 'picture matching') which require turn taking in a group of 5-7 people. He likes puzzles.

CASE 4

COMMUNICATION

Receptive Language: He follows the commands given to him in the class and also by other teachers. Answers questions related to 'what' 'how many', yes/no in any situation. Identifies different emotion happy, sad, crying, anger, on himself and also on others. Takes the responsibility of the other children when asked, like to escort the other children, to their class. He follows the instructions given to him.

Expressive Language: Requests for the desired items of his needs. Also describes a given picture and answers questions related to it, with some verbal clues. Describes the common animals, objects, like "this is a bag", "it is yellow in color", "elephant has 4 legs". Can tell his name, his age, father's name, mother's name, home address, school name, birthday. He also describes his emotions/feelings. He tells the feelings of other children. Passes the written message to the concerned teacher.

Academic

Maths: Does 'before and after', in between numbers. He knows rote counting till 100. Can do single and double additions. Can do simple digit problem

sums, of addition. Can do single digit **subtraction**. He also does line segment of addition. Can also write number 1-20 in **words**. Knows different shapes and draws them independently.

Time: Knows the days of the week in rote **and** in writing. Can draw 1 hour (drawn on the work sheet).

Money: Recognizes coins and rupees 1, 2, 5, 10, 50, 100. Makes combination of Re. 1 upto Rs.5 but needs **verbal** reminder to 'stop'. Goes to the market and ask the shopkeeper for the **desired** item, but doesn't give exact amount. He has started reading MRP of the given product.

English: Can write few lines about himself (**name**, age, sex) father's name. mother's name, home address, school name, his birthday. Can also write 5 lines on the given picture of animal, object (**Elephant**, cat, dog) with verbal prompt. Can answer questions related to a picture (what, how many colors. where, on, in and under). Can also tell **names** of 5 animals, fruits. vegetables, and colors. Can draw a traffic light **and** national flag and answer questions related to it, like what is the color of the stoplight?

Reading: Reads simple 2-3 lines (this is a spoon, it is green in color) with pictures and answers the questions related to it. He can also read his family members' name, classmates' name.

Concept: Has concept of yes/no, on/off, big/small, start/finish, and boy/girl.

Hindi: Knows Hindi alphabets, can identify them. He also identifies the common objects and writes them but he needs help in spelling it out. He does fill in the blanks of a given picture. He has started writing short sentences

Self help skills

Toilet/cleaning up: Can indicate his toilet needs by saying 'toilet' and also goes to the toilet independently. He washes his hands and face with the soap independently.

Dressing: Wears his shirt independently. Can button his shirt. He can fold hanky in two folds, but needs visual clues. Wears shoes and ties laces independently.

Play: Participates in-group of 2-3 people. Also plays simple board games following simple clues. Waits for his turn but sometimes needs reminders, when waiting is too long.

Art and Craft: Can hold the scissors and can cut on the straight line given. Can also punch and staple on the given dots. (Visual clue), but not properly.

Can make common objects or pictures by himself (sun, house, apple, kite, flower).

Cooking: Can identify different fruits and vegetables. Can cut vegetables but not in small cube size (if sample is given). He **needs** physical help, can cut the vegetables for the sandwiches and can make **plain** sandwiches.

Dance/ drama: Participates in the group very **well**. Imitates the action by the other person. Imitates 2-3 step of dance.

CASE 5

Emerging Skills

Imitation

He can imitate simple actions like 'arms up', 'touch head', etc but most of the time he does not comply with the instruction 'do this'. This is more due to non-compliance than a difficulty in imitation. He uses simple speech to communicate and also has echolalic speech, **and** can imitate verbal sounds well.

Gross Motor: Most of his gross motor skills are age appropriate. He can bolt and unbolt doors and windows however small the bolt. He can carry his chair to another room and arrange the tables and chairs in class; can also lay the tablecloth for 'tiffin time'. He can throw a ball, and also aim at a target. He can catch a ball of medium size. He can kick a ball well and can hit a stationary ball with a bat on his own. He can ride the cycle very well.

Fine Motor: He can unscrew bottle caps of any size and screw them back on very easily. He can sharpen a pencil, use an eraser and do pasting activities with glue very well. He holds a pencil with a good grip and can do simple mazes, color within a boundary and draw a picture by joining dots. He can pour water from a bottle into a glass quite well.

Hand-Eye Coordination: He does not have much difficulty in this area.

Cognitive performance

Maths: He has number concepts till 100 and recognizes them by shape till 30. He knows addition '+1' '+2' and '+3' till a sum of 15. He recognizes Re 1 and Rs. 2 and 5, 10, 50, and 100. He can exchange coins for a food item during a shopping activity done at workplace. He has started to learn to read time and know 'O' clock and "half past" concepts.

Reading: He can read around 35-40 words that he sees in his environment and simple sentences like "he is a boy" 'the boy is sleeping' etc. He can read color names, days of the week and common verbs like pull, push, drive etc. He knows noun-verb association like 'read book' etc. He has started reading months of the year. He can recognize alphabets by shape from a-z and knows (a, b, c, d, e, f, and m) alphabets in isolation and in sentences.

General: He can do packaging with 3 objects very well. He can do picture story sequencing, fix beads according to a picture jig. He understands concept like near and far, long and short one and many. He knows parts of a body and its function, parts of a plant and its functions. He can discriminate between living and non-living things.

LANGUAGE SKILLS

Receptive: He can understand simple 3 sentence instructions e.g "take your book, go to the shelf, and keep it in your bag" .

Expressive: He can greet and say 'Hi', 'good morning'. He says 'present' during attendance and asks to go to the toilet or drink water. He also repeats words during work sessions and in the classroom.

SELF HELP SKILLS

Eating: He eats very well on his own.

Toileting: He can verbally ask to go to the toilet and can undress himself .

BEHAVIOURAL DESCRIPTION

Communication: He can communicate very well his needs/wants. If verbally he is not able to express himself, he takes an adult by the hand. However when stressed he sometimes expresses himself inappropriately.

Social Interaction: He is very happy to be around both adults and his peer group. He however does not know how to approach another child and initiate an interaction appropriately. Since the last 3-4 months, when asked to hold a younger child's hand and take him/her for assembly, he does it. He even fights with his peer group, and makes a note of the members who are absent.

Attention and use of Sensory Modalities: He can attend an individual work session for 20 minutes easily. He seems to have this need to get up after about 2 activities and sit on the floor but if given sometime, he will come back to his seat. He is learning to attend a classroom set up and is focused when the teacher writes on the blackboard. He is sound sensitive and sounds like

another child's crying bothers him **quite** a bit. He keeps legs on **the table** and sits.

Interests, Preferences: He enjoys **listening** to music, riding a **cycle** and playing with strings or bits of **paper**. He likes to open and **shut doors**, windows, gates and cupboards.

Challenging Behavior: He gets **stressed** if there is a change in routine and he has not been prepared for the **change**. **When** he is upset he tends to push others and cry.

Response to Structure: He works **very well** when his work sessions are structured. He is learning to follow a **schedule**.

CHAPTER 4

ANALYSIS

This analysis is based on the study of 5 autistic children, whose case study has been discussed in Chapter 3. I have studied their verbal responses needed for interpretation.

CASE I

This case has been proved autistic with the help of the DSM IV test battery. His functional assessment marks him autistic some where between moderate to severe. His rote memory is excellent. He is good at his reading and writing skills, which is usually the case with the moderate autistic children. Their skills at reading, writing and comprehensions are good and some times even better than mild autistics. He can easily read and write 2-3 line sentences. But using them for the purpose of interaction would not be possible for him. But when it comes to communication his expressive language is minimum. He uses single words for the purpose of communications and at the most two words. Complex syntactic constructions are completely missing. There is a complete loss of pronominals, for himself. Hence the 1st, person pronominals are completely missing. At the time when he had just joined the therapy sessions at his school, he was echolalic, which was both immediate and mitigated, i.e. he would repeat one word or a part of the sentence spoken by the other. e.g

"TG wants a toast"

He would echo this sentence **as just**

“Toast”

His receptive language **capacity** is good too. He can **understand** complex two step commands like

“Take the glass and close the door”.

This means his comprehension **power** is good.

Syntactic Constructions:

Speech:

One word: he usually **uses** single words for the **purpose** of communication. These words are **either** object oriented or action oriented, depending upon his purpose of **communication**, e.g. object oriented;

Popcorn

Burger

Water

Tiffin

Chocolate

Pepsi

Action oriented words are:

Stop

Move

These constructions almost **complete** his communication pattern. He is very repetitive in his expressive language. He keeps repeating what he wants, or what he intends to do.

Two Words: two word phrases are the maximum that he can use for the purpose of communication e.g. 'blue pen'. Here the first word of the phrase does not mean an adjective blue. He has named his pen as 'blue pen', and any other pen of any other color would be called 'blue pen'. On connecting and reminding he might name the proper color, but again after some time he would call it a blue pen. It is more of a name to the pen, than its description.

He also uses greetings like 'hello' and 'good morning'. These are in his role memory and probably in any greeting situations he would use it.

Again since structured syntactic constructions are not used, there are also no traces of any associated syntactic processes like tense, aspect, pronoun, gender etc.

The uncommon feature about this case is that when under a lot of stress or pressure he is able to communicate his desires the best. He can actually communicate what he wants, when under stress, e.g. when in stress he would say sentences like;

Khana do na

Food, give

give me food

Ghar jane do

Home go to give

Let me go home

Nahi jana hai

No to go

Don't want to go

These constructions show **that he** has the knowledge of **the language** but has no desire to use it for **communication**.

CASE 2

Case II has also been diagnosed as falling in the ASD by the DSM IV, test battery. The school has proved **her** moderately autistic through the CARS test battery. It is a booklet, which **does the** functional assessment of a **child** on a four-point scale. It has fifteen items, **which** need to be assessed.

There is a very peculiar feature **about** her expressive language. She avoids using pronouns. Secondly she **says** sentences, which do not directly refer to her. e.g.

Mummy Khana bana de gi

Mother food to make

Mummy will make the food

She would use this sentence **when** she is hungry, instead of **saying** something like

Mujhe Khana Khana hai

I food to eat

I want to eat food.

Chocolate me nuts bhi hota hai

Chocolate in nuts too are their

Chocolates have nuts too

This sentence as interpreted, actually means that she should be given chocolates, which have nuts.

She prefers using sentences which do not put focus on her, or which do not draw direct attention to her. It is in very particular and rare situations when she would use sentences like;

Vrinda: ne ye Kya Kar diya

Vrinda this what to do

what is this that vrinda did

Or

Vrinda Ko Khana Chahiye

Vrinda food needs*

Vrinda wants food

In all her syntactic constructions she avoids using the personal 1st person pronouns. She would communicate without using pronouns, e.g.

Khana Khana hai

Food eat is

Have to eat food

Pani Pina hai

Water drink is

Have to drink water

There is only one exception where **she** says,
"I am fine."

Here the use of 'I' is not a result of her syntactic creativity, but through her rote memory. She has been taught to reply, 'I am fine' to questions like 'How are you?'. Hence upon asked such a question she immediately uses words like 'I' in a fixed setup. She has **problems** with delayed echolalia, i.e. she repeats words or phrases after a **long** delay. She also has **episodal** memory, e.g. every time she visits **her** grand parents home she can remember the episodes of her last visit.

Sentence Construction

Speech: One Word:- Case II tries to **reply** back in one word initially, e.g. if asked for a particular drink she would **just** reply 'pepsi', 'pani', 'coke', 'biscuit', 'chocolate'. If asked to repeat, she would **add** on

'pepsi chahiye'

drink want

want a drink

'pani chahiye'

water want

want water

Most of a sentences which are three words, are either object oriented or action oriented. e.g.

Tiffin Khana hai

Tiffin to eat

want to eat tiffin

Khana khana hai

Food to eat

Want to eat food

Her complex utterances are mostly grammatical and she follows the word order of the language (she mostly speaks in Hindi).

Vrinda ko paper aur cha hiye

Vrinda paper more wants

Vrinda wants more paper

Virinda ne ye kya kar diya

Vrinda this what to do

what is this that vrinda did

Such constructions are grammatically right, with correct word order too. They fulfill the sentence requirement of subjects, object and verb. But such utterances are rare. This means that language is not a problem with her, but she prefers to use minimum words for the purpose of communication

Gender: She seems to be aware of the masculine and feminine gender and also the distinction between a boy and a girl. This is obvious in the following example:

Indrani aaj aye gi

Indrani today will come

Indrani will come today

Tiffin khana hai

Tiffin to eat

want to eat tiffin.

Toffee khani hai

toffee to eat

want to eat toffee.

She can differentiate gender on the basis of the object, e.g. Khana, toffee, cow, buffalo etc. Uses of conjunctions are never seen since such long and complex sentences are never created. They might be uttered through rote memory or echolalia.

Case II in a formal kind of a setup has a structured interaction, where as in a peer group it is very unstructured. By structured I mean, a very formal defined set of interaction where as in a peer group she may or may not interact at all. She likes to sit by herself than with a group of children.

Case 3

This is a case of moderate autism. He is a hyper active child. His temper tantrums are hitting, pinching, biting etc. He is very sensitive to sound like that of the fan, clock ticking etc. He does not like these songs and therefore, closes his ears tightly to avoid any such disturbance. If he still hears them, a caregiver has to ease his head muscles, else he keeps hitting and pinching. He also does not like the sight of aquariums, and on their sight loses all control on himself. He is shown cards like 'no pinching', 'no hitting' and, 'no biting' as a behavioral therapy. He has a lot of behavioral problems rather than communication problems. He can communicate easily of his needs and desires verbally. His language capacity is good; but he prefers to say sentences only as far as the meaning is conveyed. He has a huge vocabulary, but uses limited words for communications. He can pick up words fast and retain them too. His expressive language is good and much more structured than the others.

He has a severe problem of echolalia both delayed and immediate e.g. if the teacher says "say bye to Mamma" he would repeat "bye to Mamma".

There is just no use of 1st person pronoun. He identifies himself with his name rather than the 'I' pronoun. e.g.

pani pina hai

water to drink

I want to drink water

Toffee chahiye

Toffee want

I want a toffee.

He has a good rote memory and can actually understand most of the concepts like; long/short, big/small, in/on/under etc.

Sentence Structure:

Speech- One Word:- His one word structures are a part of his immediate or delayed echolalia. In some cases he would use one word to simply name things like;

'pepsi', 'chocolate', 'pencil'

two or three words:- He uses such words in the actual sentential constructions for verbal communications. They have both a subject and an object and are grammatically correct. He can follow the basic syntactic processes 'like' he is conscious about gender, which is obvious in his choice of words, e.g.

'pencil gir gayi'

Pencil fell down

He also is familiar with the distinction between boy/girl his concepts about prepositions are clear too and he uses them in spontaneous speech. He is made to learn these concepts through academics, art and craft, and drama.

Tense is another important aspects. Case III has some sense of time. He uses terms like 'yesterday' and 'tomorrow'. He can talk about his immediate past, present and immediate future e.g.

'Yesterday I went to Mc Donalds'

kal swimming jayenge

tomorrow swimming will go

I will go for swimming tomorrow.

CASE 4

This case was proved mildly autistic by the functional assessment done in his school. He is one child who has behavioral problems rather than language problems. He seems to be a normal child, when one communicates with him. He can very well understand and interact in Hindi. His major problems are in the areas of behavior. He does a lot of 'self-talking' i.e. he continuously keeps talking to himself. He also has a tendency to hit others, when angry. When angry he also does hand flapping, and rocking. He also has problems with his sitting behavior he can't sit at a place for a very long time. He also has problems with his concentration level. He too is a high functioning child. He is academically very strong. He can easily do complex divisions and multiplications and problem sums.

He has problems with delayed echolalia. He would repeat a phrase after a long delay. He has clear concepts of differences like boy/girl, in/out, in/on, happy/sad etc. He, as others do, avoids the use of personal pronouns, and would do most of the verbal constructions without them. e.g.

Gir gaya

Fall

Fell down

Abhi aur khelna hai

Now more to play

Want to play more now.

He has a good rote memory and can even remember immediate instances from the past and can narrate them too. His episodal memory is

also good. His receptive language is **good too**. He can understand and follow most of simple and complex commands **without** any prompt.

Sentence Structure:

Speech one word- He would repeat one **word** in the nearest of situation. His problem is of speaking too much to **himself**, which he can not **comprehend**, he usually uses one word constructions **for** naming things. They are **only** subjects and objects e.g. 'chocolate', 'Tiffin' etc. Two or three words in the combined form are the most common, e.g.

Ghar jana hai

Home to go

Have to go home.

Sab stop karo

All stop do

Stop every thing.

These constructions miss the **pronominal**. He is familiar with the concepts of conjunctions and prepositions **too**, that he comfortably uses in his constructions e.g.

Mujhe bahar jana hai aur TV dekhana hai

I out to go and TV to see

I have to go out and watch TV.

Such constructions are rare though, and only at times when he is desperately interested in leaving one activity and embracing the other. He becomes more assertive then. Prepositions too are used easily by him as he

was trained to do so through the classroom teaching, dance and drama session and also through art and craft. He is comfortable using sentences like;

Kursi per nahi baithana

Chair on no sit

Don't have to sit on the chair.

CASE 5

Case V too is an autistic child, and is diagnosed moderately through his functional assessment. He is a hyperactive child and has more behavioral problems than the verbal ones. He is a violent child and does a lot of hitting and kicking. He is very short tempered and loses his control fast. His receptive language is bad and he hates to take commands. It is an effort to make him do some job. His expressive language is good and can make full sentence constructions to communicate his feeling and desires.

The uses of pronominal is nil. He avoids using 'I' for himself. He rather uses his name or avoids using it at all. e.g.

Khana Khana hai

Food eat is

want to have food

He has immediate echolalia.

Sentence Construction:

He uses proper word order. His knowledge of conjunctions and prepositions is clear and can comfortably use them;

Table pe books rakh do

Table books to keep

Keep the books on the table

Tenses:

He can comfortably use **sentences** in the present tense. For the **past** tense, he can only relate to his **immediate** past i.e. yesterday e.g.

Yesterday swimming class tha

Yesterday swimming class was

yesterday there was a swimming class

Aaj swimming class hai

Today swimming class is

Today there is a swimming class

Future can be related only in **immediate form** e.g.

Kal swimming class hai

Tomorrow swimming class is

Tomorrow there is a swimming class

His sentences are more structured and **have** both a subject and an object. He speaks in Hindi most of the time and in **English** when forced to, in a **formal set up**. He has also learnt certain words and phrases through prompts and reminders, e.g.

'Thank you', 'I am fine', and uses them in his constructions. He is **just not** conscious about the tense aspect. He is **unable** to perceive the concepts of yesterday and tomorrow. Therefore, for him **every** thing is in present state. He rote memory is good. He also has gender consciousness.

CHAPTER 5

CONCLUSION

SUMMARY ANALYSIS

I would like to conclude this study by the notion that Autism is a developmental disorder of the brain first assumed by Leo Kanner, characterized by problems in language development, communication skills, and social developments. Its prevalence is about 1 per 1000 with preference for males and it usually presents itself within the first three years of life. A number of factors are described as characteristics of the autistic child. These include extreme social isolation or 'aloneness' from the very beginning of life, some flashes of purposeful behavior and an obsessive desire to maintain sameness in all areas of life. These disorders can often be reliably detected by the age of 3 years and in some cases as early as 18 months. Studies suggest that in some cases the children may be accurately identified by the age of 1 year or even younger. The appearance of any of the warning signs of ASD is a reason to have the child evaluated by a professional specializing in these disorders.

Parents are the first to notice unusual behavior in their child. In some cases the baby seems "different" from birth, unresponsive to people or focusing intently on one item for long periods of time. When an engaging babbling toddler suddenly becomes silent, withdrawn, self-abusive or

indifferent to social overtures, it **needs** to be taken into account as a developmental problem.

Autism is defined primarily by its **behavioral** manifestations;

- (i) Impairment of interpersonal **relationship**;
- (ii) Impairment of language;
- (iii) Insistence on sameness;
- (iv) Disturbances of sensory input; and
- (v) Disturbances of mobility.

In addition, they will often have unusual **responses** to sensory experiences, such as certain sounds or the way objects **look**. Each of these symptoms runs the gamut from mild to severe. They **will** present in each individual child differently. For instance, a child may **have** little trouble learning to read but exhibit extremely poor social **interaction**. Each child will display communication, social, and behavioral **patterns** that are individual but fit into the overall diagnosis of ASD.

Children with ASD do not follow the typical **patterns** of child development. In some children, hints of future problems may be apparent from birth. In most cases, the problems in communication **and** social skills become more noticeable as the child lags further behind **other** children of the same age. Some other children start off well enough. **Often** between 12 and 36 months old, the differences in the way they react to people and other unusual behaviors become apparent. Some parents report the change as being sudden, and that their children start to reject people, act strangely, and lose

language and skills they had previously acquired. In other cases, there is a plateau, or leveling, of progress so that the difference between the child with autism and other children the same age becomes more noticeable.

Autistic children on the basis of language can be broadly defined into two kinds; verbal and non-verbal autistics. I have looked into the problem areas of only the verbal autistics. As far as the language behavior of an autistic child is concerned, a study of isolated, specific and salient features of phonological and syntactic patterns of his expressive language are identified. Some of the problem areas pertaining to his language are: Echolalia, atypical vocabulary development, pronoun reversal and morphosyntactic and pragmatic errors. Abnormalities of voice and articulation are also common.

- (i) Echolalia – Immediate Echolalia is the meaningless repetition of a word or a group of words. This audio vocal behavior carries no meaning and has no apparent communicative function. It has been found that echolalia rarely occurs when the message is comprehended, when the child fails to comprehend he tends to produce an immediate echo. Delayed echolalia is another form which is a repetition of word or group of words after a long delay.
- (ii) Atypical Vocabulary Development: Once the autistic child has begun to talk, spontaneous vocabulary tends to convey little information, and often lacks communicative function. The most readily acquired skill is object naming. Autistic children also tend to develop vocabularies that focus on a single topic. Autistic children appear unable to generalize the meanings of words. They use words or sentences within a single context or applying to a single

topic. They lack the **ability** to use this speech to **communicate** in any functional manner.

- (iii) Pronoun Reversal: this is a typical feature of verbal autistics, when they substitute ('I' for 'You') etc. some say this could be a sign for lack of self identification or it could be a function of Echolalia. Some researchers say that autistic children were not actually reversing pronouns but simply repeating what they had heard. This could reflect their inability to cope with the shifting reference involved in learning deixis of personal pronoun. They seem unable to grasp the changing roles of speaker and listener.
- (iv) Morpho Syntactic and pragmatic errors: The most likely errors are omissions of prepositions and conjunctions from phrases, resulting in a kind of telegraphic speech. They fail to learn the rules of conversation and display 'Conversational Clumsiness'. They also defy pragmatic principles, like the politeness principle, and fail to make judgments to the appropriateness of their comments in a particular situation.
- (v) Abnormalities of voice and articulation: It is noted that the voice of autistic children tends to be jerky, with poor control of pitch and volume and showing odd intonation patterns. They have a parrot like monotony. Their other vocal abnormalities are hoarseness, harshness and hyper nasality.

Language cannot be independent of behavior. They are interlinked and one reflects the other. Since autism is behavioral disorders, it needs an integrated approach. Once an autistic child overcomes his behavioral disorders, his linguistic capacity also enhances. Hence both the things

need to be worked upon simultaneously. Once the child comes out of his behavioral doom and starts to interact in a peer group or a larger community, he needs to communicate through language, and that's when his language enhancement can be worked upon.

But to start with, a child needs to be diagnosed appropriately. In the Indian environment a child is symptomatically diagnosed and on this basis his functional assessment is done.

These diagnoses are done through a lot of test batteries like the DSM IV, CARS, Autism composite checklist etc. On the basis of this diagnosis a functional assessment of the child is done, and further on, a structured therapy session is derived for him, within the following eight categories:

- i. Pre-linguistic learning behavior
- ii. Sensory perceptual skills (visual, auditory, tactile, kinesthetic.....)
- iii. Pre-language skills
- iv. Speech, language and communication skills
- v. Developmental rates and sequences
- vi. Learning behaviors
- vii. Relating skills
- viii. Motor development

My work comprises of 5 case studies; whose selection has been done on the basis of:

- (i) The age of the children
- (ii) Their linguistic background
- (iii) The availability of cases.

I have tried to observe their verbal behavior at the syntactic level and tried to relate it to the severity of their disorder. The basic language deficits of the autistics are also studied. I have analyzed that the more severe the disorder the less their capacity of verbal communication. I have also tried to observe their syntactic constructions, only to find that most of the syntactic process in mild to moderate autistic children are intact, except for the pronominals and the tense aspect. The use of conjunctions was minimum as there were no complex constructions, but their rote memory permits them to use complex utterances, which are situational.

These studies need to be on a large scale and over a longer period of time to know and observe their actual verbal and behavioral changes. These cases need to be observed in different environments too, to know their actual behaviors and communicating patterns. Though schools are the ideal places to observe their everyday communication skills, it may sometimes be necessary to observe language forms outside of their natural use in the environment. Upon such close observation, it is easier to know the meaning of their individual words and phrases in context where the child's intention makes the meaning clear. We can then also know them, that in what way, the child can build up a repertoire of flexible language units and learns to combine them to form new communicative phrases. Hence an effective system should be made to help the child build up a semantic store and should compete with any use of delayed echolalia or immediate echolalia as an attempt at communication. Thus powerful reinforcers should be used to encourage an autistic child to communicate with (speech or sign) and

something to communicate for (meaningful and naturalistic to the world). This should be done with a lot of sensible imagination keeping in mind their verbal capacity.

It would be good to have a model that will teach communicative awareness – even in autistic children who have a fair degree of knowledge for language. They are seldom aware that communication is a process that involves at least a speaker and one listener. They may respond to their names but not use cues such as eye contact to realize when they are being addressed or to signal to others that they are attending. They are poor at ensuring they have an audience for their own communications. They may need to be taught to gain attention before they speak or sign, including the use of vocatives. This failure to understand the nature of communication is seen when they deliver messages to empty rooms, or sign for what they want with their hands hidden beneath the table. It is a very useful experience for the speaking child to have to decide whether to use sign or speech in addressing another child; it is one of the few concrete ways of getting the child to consider the listener's needs.

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APPENDIX

NAME: TUHIN GHOSH

AGE: 9 yrs.

EXPRESSING FEELINGS

How do you know when your child :

1) Likes an activity, food, or other?

Continuously keeps doing the activity, runs in the room and then starts it again.

Food: keep having, and whimpers if it is taken away.

2) Does not like an activity, food, or other?

He does hand flapping, or runs in circles with head tilted in one direction.

3) Feels good or happy?

He runs around in the room, with hands stretched in the air, as if he is flying.

4) Feels ill or pain?

Does hand flapping, or throws tantrums, even tries to hit somebody with his head.

5) Is hungry?

Tries to reach that object or says "tiffin", "chocolate", "pepsi"

6) Is anxious or afraid?

Throws tantrums, starts hand flapping, or starts screaming

REQUESTING

How do you know when your child :

7) Wants attention?

Tries to hit the person concerned with his head.

8) Wants more of something?

He'll keep snatching it, or runs after it.

9) Wants you to continue an activity(for example, playing a game or rocking) ?

Keeps ~~to~~ doing the activity, tries to pull it back.

10) Wants you to stop an activity?

"Stop... stop". Or just tries to run away from that place, to avoid participating in that activity.

11) Wants help?

He rarely asks for help. He rather prefers doing it himself. He has to be looked after so as to help, whenever he needs it.

12) Wants something to eat?

Reaches that food item, or just names it - "popcorn", "burger"

13) Wants something to drink?

just names it.
"pepsi", "loke" "water / milk"

14) Wants a certain object?

Tries to reach it or just names it.
"pencil", "apple."

15) Wants to use the bathroom?

Says "toilet" sometimes, otherwise tries to go himself, or reaches the bathroom and waits for help.

16) Wants affection?

17) Does your child make a choice between several objects when the objects are presented or in view? Describe.

He just picks the object he needs.

18) Does your child make a choice of an object or activity when the possible selections are not presented or in view? Describe.

Generally not, but at times, very rarely might name it "Blue pen" (instead of red)

19) How do you know when your child does not understand something that someone has said? Does your child ask for clarification by saying, "what?", or "I don't understand" or by doing something like self-biting? Describe.

He just ignores and again gets lost in his own world, and starts hand flapping.

20) Does your child ask for information(for example, where someone is, where someone lives, or when a birthday or holiday will occur) ? Describe.

No

21) Does your child ask the same questions repeatedly?

No

22) Does not want to do something or wants to stop doing something? Describe.

Starts his tantrums, produces peculiar sounds, or rolls on his back.

23) Does not want a specific object or food? Describe.

Does hand flapping, and looks the other way

What does your child do when:

24) Not allowed to do or have something desired? Describe.

Throws tantrums, hand flaps, makes peculiar sounds.

25) A desired object is taken away? Describe.

He again throws a lot of tantrums, starts hand flapping, cries, howls.

26) The environment or routine is changed? Describe.

He hates it if the usual bus in which he travels doesn't come, or he cannot take it. He starts screaming and throwing tantrums.

RESPONDING

Describe your child's response to each of the following:

27) Verbal directions. Tries to follow them with lots of visual clues, and reminders.

28) Questions that begin with "what, who, where, when, how or why"

He prefers ~~asking~~ answering in one word for the above questions, with prompts. 'when' type of questions almost always remain unanswered.

29) Questions that call for a 'yes' or 'no' answer.

Answers by nodding his head.

ACKNOWLEDGING OTHERS

30) How does your child greet you or others without direction?

Extends his hand to say "hello" or may say "good-morning" with lots of prompts. Also says "bye"

31) How does your child respond when greeted by others?

He shy's down and moves away, the more someone reaches him.

32) Does your child uses polite words **such** as(“thank you”, “please”, and “excuse me”) appropriately without prompting?
Describe.

May say "Thank you" with continuous prompting if he feels like

COMMENTING

Does your child:

33) Comment about himself and his own activity? Describe.

No

34) Comment about other people or their actions? Describe.

No

35)Talk about events that happened in the past or will happen in the future? Describe.

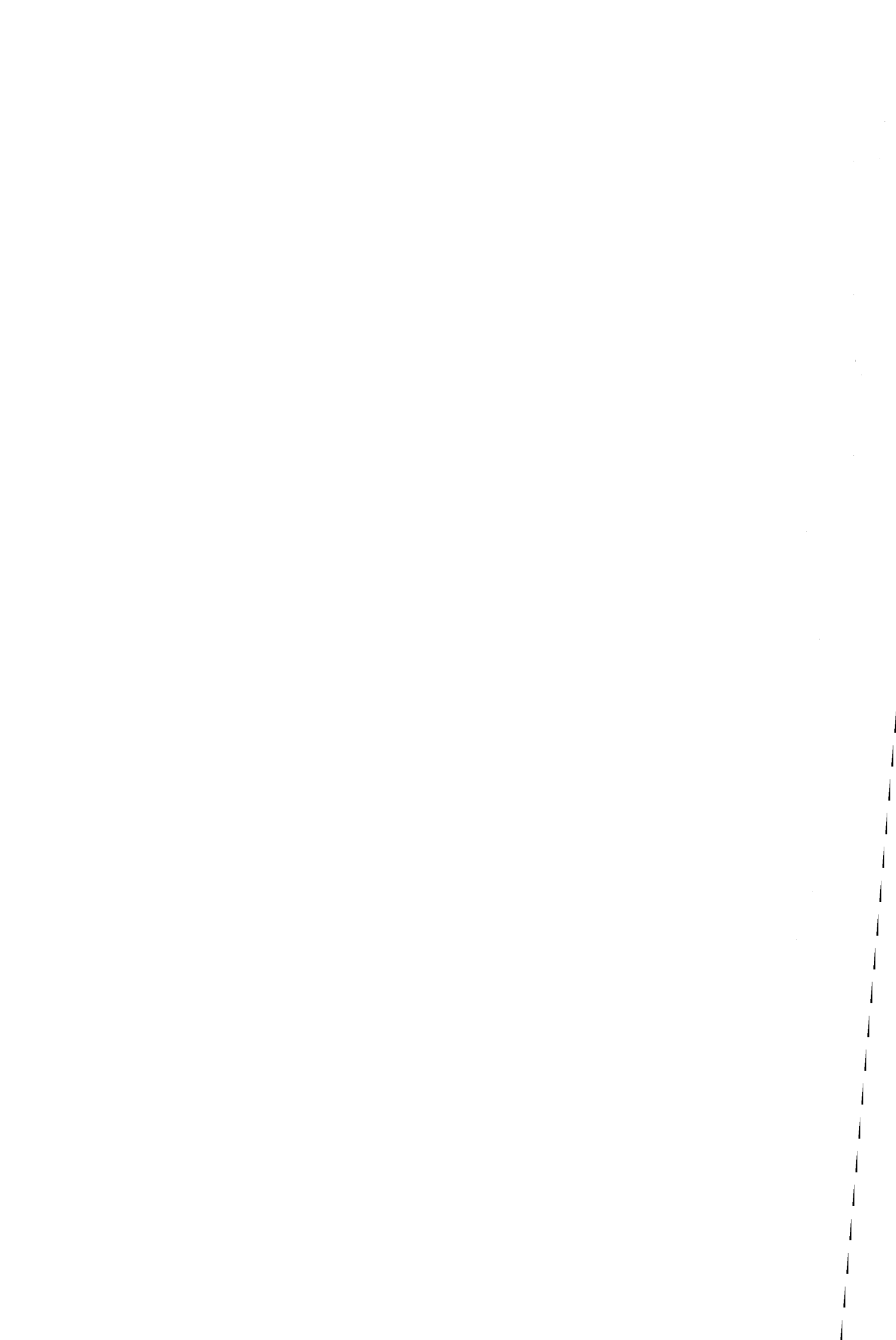
No

COMMUNICATIVE LANGUAGE

36)Does your child talk to himself about what he is doing , is going to do(for example, “sit down” as he sits down) or is not supposed

to do(for example, "don't touch" when beginning to touch something that is off limits), as if repeating a rule? Describe.

No



TUHIN

tɪfɪn / ʃɒkɪlɛt / pɛpsɪ

tiffin / chocolate / pepsi

stop ... stop

stop ... stop

pop kɔrn / bɑː bɜːgə

pop kɔrn bɜːgə

bluː pen

blue pen

paːnɪ

pain

hello

hello

gʊd mɔːnɪŋ

good morning

VRINDA CHASWAK : NAME

12 yrs : AGE

EXPRESSING FEELINGS

How do you know when your child :

1) Likes an activity, food, or other?

"toffee खीरे खाना है"

"Rakha खीरे बिचारागी" (Rakha is her maid, if she likes a particular food item she would want Rakha to help her with more)

2) Does not like an activity, food, or other?

activity: she'll stop doing it or stop participating, she'll go still for a very long time, as if not to hear a word.

food: "खीरे में खाना है", "नहीं चाहे", "नहीं.. नहीं"

3) Feels good or happy?

she claps a lot, smiles (Vrinda hardly smiles and so when she smiles once in a while it's understood that she is happy and enjoying a particular activity or food, or a TV programme.)

4) Feels ill or pain?

Sweams or starts crying, bows down her head on the table.

"खीरे खाना है"

5) Is hungry? "Vrinda नी खाना खाना है", "अभी खाना बना देना है"

"आज burger खाना है"

"खाना खाना है", or "tiffin खाना है"

With lots of prompts she might give her preference in food

6) Is anxious or afraid?

She'll sit in a corner and lower her face with her hands, she closes her eyes and bows down on the table, or hides her face in the pillow when in bed.

REQUESTING

How do you know when your child :

7) Wants attention?

Starts screaming, or starts throwing her things on the person she wants attention from. She even starts going around that person.

8) Wants more of something?

"आँखें चाँद"

"Vrinda की आँखें चाँद" or "आँखें दे दो"

"Vrinda आँखें पढ़ाओ" "आँखें उठाने दे"

9) Wants you to continue an activity (for example, playing a game or rocking)?

She'll not get up from that spot of activity would bring the caregiver's hands to keep doing the activity. Would stop following directions or commands for any other activity.

10) Wants you to stop an activity?

"आँखें मत चढ़ाओ" "आँखें cupboard से दूर रहो"

If the mother insists her to go to school and she doesn't want to go, she says "School में जाऊँगी नहीं"

11) Wants help?

She prefers to reach the person she wants help from and shows him what she wants help in.

12) Wants something to eat?

"आँखें दे दो"

With lots of prompts she'll say the same thing in a formal tone "please can I have papad" or "Can I have papad"

13) Wants something to drink?

"पानी", "कोई चीज दे"

14) Wants a certain object? If she wants a chocolate with nuts she would say "Chocolate it nuts be $\dot{\epsilon} \dot{\alpha} \dot{\tau} \dot{\epsilon}$ " meaning get me a chocolate with nuts.

"Biscuit it $\dot{\rho} \dot{\mu} \dot{\zeta} \dot{\alpha} \dot{\tau} \dot{\epsilon} \dot{\alpha} \dot{\tau} \dot{\epsilon}$ " meaning I want cream biscuits.

15) Wants to use the bathroom?

She goes to the bathroom without any help. She is self sufficient in toilet needs, but might need help to unbutton or button her clothes.

16) Wants affection?

She'll just hug or hold the person tightly.

17) Does your child make a choice between several objects when the objects are presented or in view? Describe.

She picks up the object of her choice or might say "it $\dot{\alpha} \dot{\tau} \dot{\alpha} \dot{\tau} \dot{\alpha} \dot{\tau} \dot{\alpha} \dot{\tau}$ "

18) Does your child make a choice of an object or activity when the possible selections are not presented or in view? Describe.

~~She~~ If she has about 4 chocolates in front of her, she'll say "kit-kat $\dot{\mu} \dot{\rho} \dot{\tau}$ " i.e. the one which is not there.

19) How do you know when your child does not understand something that someone has said? Does your child ask for clarification by saying, "what?", or "I don't understand" or by doing something like self-biting? Describe.

She starts to look the other side, or gets involved in another activity or just simply moves away, meaning either she is not interested or she has not understood.

20) Does your child ask for information (for example, where someone is, where someone lives, or when a birthday or holiday will occur)? Describe.

Verinda likes is very fond of her aunt Indrani, so to know about when Indrani will come she'll say; "Indrani कब आयेगी", so that she is corrected and told as to when Indrani will come.

21) Does your child ask the same questions repeatedly?

Yes she does, only if they concern her.

22) Does not want to do something or wants to stop doing something? Describe.

"मैं नहीं करूँ, मैं रुकूँ"

"अरे नहीं करूँ"

"अरे games keyboard से मत खेलो"; if she doesn't want to play games.

23) Does not want a specific object or food? Describe.

she'll not touch it, or look at it, as if it does not exist. On insistence she sometimes throws the object or food.

What does your child do when:

24) Not allowed to do or have something desired? Describe.

she screams, or bangs her head and sits without moving. would not follow any routine there after.

25) A desired object is taken away? Describe.

Runs after it, tries to snatch it, keeps moving around the object. Screams

26) The environment or routine is changed? Describe.

keeps following the old routine, as far as her rote memory permits.

RESPONDING

Describe your child's response to each of the following:

27) Verbal directions.

she follows and responds appropriately.

28) Questions that begin with "what, who, where, when, how or why"

she can answer all such questions with prompt.

29) Questions that call for a 'yes' or 'no' answer.

she avoids yes/no type of questions.

ACKNOWLEDGING OTHERS

30) How does your child greet you or others without direction?

if they say "How are you Verinda" she replies "I am fine."

with a lot of prompts she extends her hands to shake with others.

31) How does your child respond when greeted by others?

she hugs when she is overwhelmed.
she also hides behind the curtains most of the times.

32) Does your child uses polite words such as("thank you", "please", and "excuse me") appropriately without prompting? Describe.

No. she can use such words only with prompts.

COMMENTING

Does your child:

33) Comment about himself and his own activity? Describe.

If she happens to do something funny she says,
"Vairinda tē dī dī nē pāxī"
"Vairinda looking like orange"
"Vairinda looking like apple"

34) Comment about other people or their actions? Describe.

Does not register their actions, or very conveniently ignores.

35) Talk about events that happened in the past or will happen in the future? Describe.

"Vairinda smart dēt 2ē 41ē aī"
"Sound dī disturb pāxī aī"

for an instance where she had screamed and behaved indecently.

COMMUNICATIVE LANGUAGE

36) Does your child talk to himself about what he is doing, is going to do (for example, "sit down" as he sits down) or is not supposed

to do(for example, "don't touch" when beginning to touch something that is off limits), as if repeating a rule? Describe.

No.

CASE

1 to:fi o:r k'a:ni he
 toffee aar aani h

2 rekha: o:r k'ila:egi
 rekha aar khilayegi

3 ba:d me k'a:enge
 baad me khayenge

4 nahI cha:hiye
 nahI chahiye

5 nahI ... nahI
 nahI nahI

6 ghar ja:na: he
 ghar jana h

7 Vrinda: ko k'a:na k'a:na he
 Vrinda ko aani aani h

8 mammi: k'a:na: bana: degI
 Mummy aani aani degi

9 a:j burger k'a:na: he
 aaj burger aani h

10 k̄a:na: k̄a:na: hɛ
 2011 2011 ६

11 tɪfɪn k̄a:na: hɛ
 tɪfɪn 2011 ६

12 ɔ:r ʃa: hɪye
 312 4123

13 Vrinda: ko pa: pəɾ ɔ:r ʃa: hɪye
 Vrinda ɔt 4145 312 4123

14 Vrinda ɔ:r pi:geɪ
 Vrinda 312 4201

15 ɔ:r pi:na: hɛ
 312 411 ६

16 ba:d me kəɾɛŋge
 012 3 423

17 ab̄ɪ kəbɑrd me rək̄ do
 3121 4123 2 22 21

18 ka kən a:e hɛv pa: pəɾ
 Can I have 4145

19 pa:nɪ / kək pi:na: hɛ
 411 10k 411 ६

20 ch:klet me natis bh'i: hota: he
Chocolate में नुति में एलट: ई

21 biskit me pstitū: bh'i: hota: he
biscuit में पृष्टु में एलट: ई

22 ye va: la: ča: hiye
यै वः लः चः हिये
यै वः लः चः हिये

23 ket-kæt ča: hiye
ket-kæt चः हिये

24 indra: nī a: j a: ye g z
इन्द्रः नी अ: ज अ: ये ग z
इन्द्रः नी अ: ज अ: ये ग z

25 baid me kār lēge
बाइ में कार लेगे
बाइ में कार लेगे

26 abhī rākḥ dēge
अभि राकḥ देगे
अभि राकḥ देगे

27 s̄ab geimz kōbard me dail do
स̄ब गेइमz कौबर्ड में दः अइल दू
स̄ब games cupboard में सलट ऐ

28 a: e am fa: ih
अ: ए अम फः इह
अ: ए अम फः इह

29 Vrinda: me ye kya: kār dīya:
वृइन्दा में ये क्यः कार दीया:
वृइन्दा में ये दः अइल दः ऐ पः अइल

30 Vrinda: lukɪŋ la:ɪk ɔreɪŋ
 Vrinda looking like orange

31 Vrinda: lukɪŋ la:ɪk æpl
 Vrinda looking like apple

32 Vrinda: sma:t nəhɪ ɔch pa:ɪ tʰi:
 Vrinda smart nəp æ ɪŋ aɪf

33 Sa:ʊd me dɪstərb kɪyɑ: tɑ:
 Sound ɔt dɪstɪrb fənɪt aɪf

89

NAME : AADIT

AGE : 8 YRS.

EXPRESSING FEELINGS

How do you know when your child :

1) Likes an activity, food, or other?

Keeps doing it, tries to reach to that food item. Only if it is not possible to get it he'll ask for it. "toffee class" "dance class", "yoga class." Since he likes to dance or do yoga

2) Does not like an activity, food, or other?

Avoids that activity or food. Might do so if forced to.

3) Feels good or happy?

He starts moving around at the same place for a very long time, unless made to sit down. Keeps humming to himself.

4) Feels ill or pain?

Shows discomfort by making whimpering sounds, or short outbursts. Covers his ears with his hands and screams.

5) Is hungry?

"tiffin time", "tiffin ¹/₈ 8", might just get up, to reach his tiffin and start having it.

6) Is anxious or afraid?

He covers his ears with his hands and screams.

REQUESTING

How do you know when your child :

7) Wants attention?

Starts pulling other's things, hitting or disturbing them. Starts running away from the task place.

8) Wants more of something?

"अधिक दे", "अवत सारा चाहिए"

9) Wants you to continue an activity(for example, playing a game or rocking) ?

He holds your hand and makes you keep doing it. Pulls the caregiver to the place of task.

10) Wants you to stop an activity?

Screams "नहीं", "No.. No." "अधिक नहीं"

11) Wants help?

He prefers to be left alone till somebody comes for help or reminds him of his work.

12) Wants something to eat?

"pizza चाहिए", "chocolate चाहिए", if nobody is listening to him, he screams and says "tiffin", "chocolate". etc.

13) Wants something to drink?

"पानी पीना है", prefers to say just "पानी"

14) Wants a certain object?

"Ball $\frac{2}{2}$ $\frac{1}{2}$ ", "pencil $\frac{2}{2}$ $\frac{1}{2}$ " to ask for his fallen pencil.

15) Wants to use the bathroom?

He might indicate, or start moving towards the bathroom. Avoids to say "Toilet". May say if forced to.

16) Wants affection?

Avoids people to hug him. Might hold the sarce or chunki of the caregivers. Might even hug them for a very short period.

17) Does your child make a choice between several objects when the objects are presented or in view? Describe.

Yes. He just picks them up and moves ahead. Doesn't wait for permission.

18) Does your child make a choice of an object or activity when the possible selections are not presented or in view? Describe.

Prefers not to.

19) How do you know when your child does not understand something that someone has said? Does your child ask for clarification by saying, "what?", or "I don't understand" or by doing something like self-biting? Describe.

Starts another activity.

20) Does your child ask for information (for example, where someone is, where someone lives, or **when** a birthday or holiday will occur)? Describe.

only to go home, or to play video games, or to ask who will come to pick him from school?
"एक जगह है?" , "किस video game खेलेगी है?"
"कहाँ आया?" ,

21) Does your child ask the same questions repeatedly?

Avoids to ask a lot of questions. prefers to be left alone

22) Does not want to do something or wants to stop doing something? Describe.

He just stops that activity. or says "नहीं करेगा"

23) Does not want a specific object or food? Describe.

"नहीं दे" , "नहीं खाएगा"

What does your child do when:

24) Not allowed to do or have something **desired**? Describe.

He has outbursts, and starts howling, which is for a very short time.

25) A desired object is taken away? Describe.

Does the same as in 24)

26) The environment or routine is changed? Describe.

He is not very rigid about his environment, but is very rigid, about his chair. wants to sit only on his chair.

RESPONDING

Describe your child's response to each of the following:

27) Verbal directions. follows verbal direction well

28) Questions that begin with " what, who, where, when, how or why"

Can answer such questions with prompt.
"when" questions are avoided.

29) Questions that call for a 'yes' or 'no' answer.

He can answer in yes or No.

ACKNOWLEDGING OTHERS

30) How does your child greet you or others without direction?

He immediately looks up, and takes the notice of the visitor. But soon he gets busy in his own work

31) How does your child respond when greeted by others?

He responds to his name. But prefers to be left alone.

32) Does your child uses polite words such as("thank you", "please", and "excuse me") appropriately without prompting?

Describe.

uses "Thank you" the most, but not necessarily every time. "Please" and "Excuse me" need prompts

COMMENTING

Does your child:

33) Comment about himself and his own activity? Describe.

Say "पencil अति है", "Pencil अति है"

34) Comment about other people or their actions? Describe.

if another of his classmates tries to move out of the class, he would say "X अति गति है". But this happens very rarely.

35) Talk about events that happened in the past or will happen in the future? Describe.

No.

COMMUNICATIVE LANGUAGE

36) Does your child talk to himself about what he is doing, is going to do (for example, "sit down" as he sits down) or is not supposed

to do(for example, “don’t touch” when beginning to touch something that is off limits), as if repeating a rule? Describe.

No .

AADIT

yoga: klais

योग क्लास

tsji: ča:hye

टिफिन चाहिजे

tiffin ta:im

टिफिन टाइम

tiffin khaina he

टिफिन खांना हे

or do

अथवा अट

khob sa:ra: ča:hye

खोब साऱा चाहिजे

nohi / or do

नाह अथवा अट

piza: kh:ogai

पिझा खावो

čoklet ča:hye

चोकलेट चाहिजे

'tiffin' / chocolate: čoklet
tiffin

pa:nɪ pi:nai he / or pa:nɪ
पानि पिनाई हे अथवा पानि

ball de do

बॉल दे अट

pensil gir gɔɪ

पेंसिल गिर गॉई

- 14 ghar jana he
 12 1211 11
- 15 manimā ajege
 humny 3112111
- 16 mahā karēgē
 111 11211
- 17 mahā alo / mahā chahye
 111 11 111 11111
- 18 gar gaya
 1112 11211
- 19 pensil tad tar ali.
 pencil 1113 11

NAME : MITU

AGE : 9 yrs

EXPRESSING FEELINGS

How do you know when your child :

1) Likes an activity, food, or other?

"आपके खाने में" "आपके खेल में"

2) Does not like an activity, food, or other?

"आपके खाने में", "आपके tiffin time में" to move to another activity.

3) Feels good or happy?

He likes to shake hands

4) Feels ill or pain?

He says "मेरे शरीर में" and keeps repeating it to show that he is ill

5) Is hungry?

Says "lunch time है अभी में", "Tiffin खाने में आता"

6) Is anxious or afraid?

He prefers to sit very close to someone (caregiver). He'll stick to him/her almost, not leaving them at all.

REQUESTING

How do you know when your child :

7) Wants attention?

"Mama Ma'am" calls for his ma'am. Names the person he is talking to. "papa/Māmmā"

8) Wants more of something?

"अँरे मोरि ई". If he finishes his ice cream and wants more he'll say "ice-cream अँरे ई, अँरे ई"

9) Wants you to continue an activity(for example, playing a game or rocking) ?

"अररि अँरे खेला ई", "अँरे खेला" "play time चला रेई ई"

10) Wants you to stop an activity?

"stop करो" "रत stop करो"

11) Wants help?

He just says what he wants to do, Hoping that others will obviously help

"Swings चले खेला ई", which means he obviously needs help.

12) Wants something to eat?

"ice cream खेला ई", "अँरे = Burger time ई"

13) Wants something to drink?

"अँरे pepsi time ई". He says "ओरि खेलाँरि CocaCola" meaning he wants Coke or Pepsi or any cold drink

14) Wants a certain object?

Asks for it. "pencil $\dot{\text{अ}}\text{त}$ ", "Swimming bag $\text{अपे}\dot{\text{अ}}\text{त}$ "

15) Wants to use the bathroom?

would say "Toilet $\text{अत}\dot{\text{अ}}\text{त}$ " and then uses the toilet independently.

16) Wants affection?

He surprised everybody by saying "अत $\text{अत}\dot{\text{अ}}\text{त}$ mood $\text{अत}\dot{\text{अ}}\text{त}$ " This happened only once. Otherwise he usually hugs the person or goes and kisses him/her.

17) Does your child make a choice between several objects when the objects are presented or in view? Describe.

picks up the object of his choice or might say "cheese $\text{अत}\dot{\text{अ}}\text{त}$ sandwich $\text{अत}\dot{\text{अ}}\text{त}$ " to pick it up from the other choices.

18) Does your child make a choice of an object or activity when the possible selections are not presented or in view? Describe.

He states his preference like he loves cheese sandwich, so says "cheese $\text{अत}\dot{\text{अ}}\text{त}$ sandwich $\text{अत}\dot{\text{अ}}\text{त}$ " instead of the Jam sandwich.

19) How do you know when your child does not understand something that someone has said? Does your child ask for clarification by saying, "what?", or "I don't understand" or by doing something like self-biting? Describe.

He might repetitively say "अत $\text{अत}\dot{\text{अ}}\text{त}$..." even if you are speaking. Meaning keep saying till I understand. This again might not happen always.

20) Does your child ask for information (for example, where someone is, where someone lives, or **when** a birthday or holiday will occur)? Describe.

Asks for his favourite TV show

"311 ज TV 42 pogo 311 जे 11". He wants an answer for this.

21) Does your child ask the same questions repeatedly?

Mitu has severe echolalia so repeats his sentences and questions too.

22) Does not want to do something or wants to stop doing something? Describe.

"दरु अरु ऐ गरा", "अरे नरु करु", "अरु tiffin time ई" to change the topic

23) Does not want a specific object or food? Describe.

"नरु चरु", or might ask for something of his चरु. "Muanchu नरु kit-kat चरु"

What does your child do when:

24) Not allowed to do or have something **desired**? Describe.

keeps asking for it. "अरे खुने खुने ई", "अरु play time ई". keeps doing it and if forced he sits there or lies down on the floor and starts whimpering.

25) A desired object is taken away? Describe.

Runs after it crying "अ..अ.." and keeps snatching it.

26) The environment or routine is changed? Describe.

He runs around and tries to look around for those things shows his discomfort by loosing concentration and not sitting at one place. He is restless.

RESPONDING

Describe your child's response to each of the following:

27) Verbal directions.

follows all verbal commands, some even with prompts.

28) Questions that begin with " what, who, where, when, how or why"

Has the concept of "what, who, where, how and why".
For when he'll always say "no"

29) Questions that call for a 'yes' or 'no' answer.

Replies Yes/No questions.

ACKNOWLEDGING OTHERS

30) How does your child greet you or others without direction?

He loves to shake hands, even without prompt

31) How does your child respond when greeted by others?

He prefers to shake hands with anybody who approaches him.

32) Does your child uses polite words such as("thank you", "please", and "excuse me") appropriately without prompting? Describe.

Yes in a formal conversation pattern he uses "Thank you" and "please" but never "excuse me". But uses them only in a formal set up.

COMMENTING

Does your child:

33) Comment about himself and his own activity? Describe.

" ਭੀਜ ਖੇਡੀ ਕ੍ਰਿਕਟ ਏਭੀ ", " ਭੀਜ ਮੇਰੀ ਭੀਜੀ "

34) Comment about other people or their actions? Describe.

He might enjoy if somebody falls on him. eg says " ਤੇ ਭੀਏ ਡਿਗੀ " " ਚੀਏ ਚੀਏ ... ਚੀਏ ਚੀਏ ... "

35) Talk about events that happened in the past or will happen in the future? Describe.

says " ਚੀਏ ਵਿਡੀਓਗੇਮ ਚੀਏ " if his father goes on an official trip.

COMMUNICATIVE LANGUAGE

36) Does your child talk to himself about what he is doing, is going to do (for example, "sit down" as he sits down) or is not supposed

to do(for example, "dôn't touch" when beginning to touch something that is off limits), as if repeating a rule? Describe.

Not sure, usually Not.

MITU

Sir kha:na kha:na hε
 ડાઈર ડાઈના ડાઈના હૈ |

maza: a: roha: hε
 મજા મી રોહા હૈ |

nahi kha:na hε
 નહી ડાઈના હૈ |

ab tiffin tai:im hε
 અબ તિફિન તાઈમ હૈ |

ghar jaina: hε
 ગર જાઈના હૈ |

lanč - tai:im ho gəya: hε
 લનચ તાઈમ હો ગયા હૈ |

mona: mæm / pa:pa: / məmmi:
 મોના મામ પાપા મમ્મી

or lena: hε
 ઓર લેના હૈ |

abhi: an or k'elna: hε
 અબહી અં ઓર કૈલના હૈ |

stop kəro
 સ્ટોપ કરો |

svings par cəd'na: hε
 સ્વિંગ્સ પર ચેડના હૈ |

12 a:ɪs kri:m kha:na: hε
 ઈસ ક્રીમ ડાઈના હૈ |

13 t'anda: mətləb koka: kola:
 ટંડા મતલબ કોકા કોલા |

14 a:j ti:-vi: par pogo a:yega
 આજ ટીવી પર પોગો આયેગા |

15 a:j əččʰa: kʀɪkɪt hʋa:
अज अचच अक्रकट हावः
अज अचच क्‍रिक्‍कट हावः

16 a:j məza: a:ya:
अज मजा आयाः
अज मजा आयाः

17 gɪr gəya
गिर गया
गिर गया

18 čot logɪ
चोट लॉग
चोट लॉग

19 pa:pa: vɪdɪo gɛɪmz ɪa:yɛge
पापा वीडियो गेम्‍स आयेगे
पापा वीडियो गेम्‍स आयेंगे

NAME : NAMAN

AGE : 10 YRS.

EXPRESSING FEELINGS

How do you know when your child :

1) Likes an activity, food, or other?

keeps doing the activity
"आइं खाता है", "आइं खे", "Burger है खे"
"strings आइं मारता है ... अमित नही मारता"

2) Does not like an activity, food, or other?

"नही खाता है", "खे मारता", "खेता है नहीं"
He throws a lot of tantrums if he dislikes something.

3) Feels good or happy?

He laughs a lot. keeps laughing

4) Feels ill or pain?

Screams, pushes people, cries, and makes his problem or pain obvious.

5) Is hungry?

"tiffin खाता है", "खाता है खे", "खाता खाता है"

6) Is anxious or afraid?

Becomes very quiet and tries to run away from whichever place he is in. starts to whimper

REQUESTING

How do you know when your child :

7) Wants attention?
starts throwing things, or banging the table,
or starts hitting his classmates.

8) Wants more of something?
"अधिक दो", or "अधिक खाना है"

9) Wants you to continue an activity (for example, playing a game or rocking)?

He'll keep doing that activity or keep playing, and if he is stopped he starts to throw tantrums, hits the person, throws of his things.

10) Wants you to stop an activity?

He'll start hitting if you or "अधिक मत खाना/खेलना/पढ़ना", "बंद करो दो इसको"

11) Wants help? If he can't open his tiffin he'll say "खोलो इसको", "खोल दो" or "खोलो", to the person concerned.

12) Wants something to eat?

"tiffin दो", "खाने का turn है", "अब खाना खाना है... पढ़ना मत है". "Tiffin time"

13) Wants something to drink?

"पानी चाहिए", "Thumbs-up दो दो", Prefers to take it himself if it is within reach.

14) Wants a certain object?

Takes it if it is within reach. Also says "ball chikit" "ball z zii"

15) Wants to use the bathroom?

"Toilet jana hai"

16) Wants affection?

Holds the other person's hand lightly
Does not like to be hugged or touched
by anyone.

17) Does your child make a choice between several objects when the objects are presented or in view? Describe.

He picks up what he wants, without bothering to know if it is 'off limits' or no.

18) Does your child make a choice of an object or activity when the possible selections are not presented or in view? Describe.

Yes. He says "Red dikai pen at" "Blue dikai ball at." "beads at" instead of blocks.

19) How do you know when your child does not understand something that someone has said? Does your child ask for clarification by saying, "what?", or "I don't understand" or by doing something like self-biting? Describe.

He completely ignores it. Does not bother to know what the other meant or wants to say.

20) Does your child ask for information (for example, where someone is, where someone lives, or when a birthday or holiday will occur)? Describe.

He keeps asking information like
"42 कत 3120T" "Tiffin कत 20120T" or
"Papa कत 31120T"

21) Does your child ask the same questions repeatedly?

Yes he keeps asking questions repeatedly.
e.g "toffee कत 3?" If a classmate is absent, he'll keep asking "Sujit कत 31120T" to the teacher concerned.

22) Does not want to do something or wants to stop doing something? Describe.

He starts kicking the person who stops him. Just moves away to another activity.

23) Does not want a specific object or food? Describe.

He simply throws it away; or might scream and say "कत 31120T". He hates bananas so says "banana कत 2010T फुल्ले 31120T" and throws it off.

What does your child do when:

24) Not allowed to do or have something desired? Describe.

He is very violent at times. So starts shouting and hitting the person either with foot or fists.

25) A desired object is taken away? Describe.

Becomes violent again, as above

26) The environment or routine is changed? Describe.

He again throws tantrums and becomes violent.

RESPONDING

Describe your child's response to each of the following:

27) Verbal directions. He follows them ^{well}, but with hesitation

28) Questions that begin with "what, who, where, when, how or why"

Can answer all the above questions well.

29) Questions that call for a 'yes' or 'no' answer.

He always answers 'No'. Till he is prompted and corrected to say yes;

ACKNOWLEDGING OTHERS

30) How does your child greet you or others without direction?

He looks at you and may or may not greet you. He can say "Hi", "good morning" "Hello" only if he is in a mood to say so.

31) How does your child respond when greeted by others?

Tries to move ~~so~~ away. Avoids such encounters. Tries to make himself busy in some other activity to avoid any confrontation with strangers

32) Does your child use polite words such as (“thank you”, “please”, and “excuse me”) appropriately without prompting? Describe.

He knows how to use these words, but he may or may not use them. But with prompts he can definitely use them.

COMMENTING

Does your child:

33) Comment about himself and his own activity? Describe.

No

34) Comment about other people or their actions? Describe.

No

35) Talk about events that happened in the past or will happen in the future? Describe.

He says "मुज्जित कल नई आया था"

COMMUNICATIVE LANGUAGE

36) Does your child talk to himself about what he is doing, is going to do (for example, “sit down” as he sits down) or is not supposed

No

to do(for example, “don’t touch” when beginning to touch something that is off limits), as if repeating a rule? Describe.



NAMAN

1. ॐ: r. kha:na hε
 ॐ: r. ॐ: r. ॐ: r. ॐ: r.
2. ॐ: r. do
 ॐ: r. ॐ: r.
3. ॐ: r. do
 ॐ: r. ॐ: r.
4. ॐ: r. kha:na hε
 ॐ: r. ॐ: r. ॐ: r.
5. ॐ: r. ॐ: r. ॐ: r.
 ॐ: r. ॐ: r. ॐ: r.
6. ॐ: r. dōgga:
 ॐ: r. ॐ: r.
7. ॐ: r. kha:na hε
 ॐ: r. ॐ: r. ॐ: r.
8. kha:na: de do
 ॐ: r. ॐ: r.
9. kha:na: kha:na: hε
 ॐ: r. ॐ: r. ॐ: r.
10. ॐ: r. do / ॐ: r. kha:na hε
 ॐ: r. ॐ: r. / ॐ: r. ॐ: r.
11. ॐ: r. ॐ: r. kha:na / kha:na: / pa:na:
 ॐ: r. ॐ: r. ॐ: r. ॐ: r. ॐ: r.
12. pa:na: ॐ: r. ॐ: r.
 ॐ: r. ॐ: r.
13. ॐ: r. kha:na ka: ta:na hε
 ॐ: r. ॐ: r. ॐ: r.
14. ॐ: r. ॐ: r. ॐ: r.
 ॐ: r. ॐ: r.

15 toilet ja:na: hε
 toilet जा:ना: ह

16 bi:ds do
 beads दो

17 ghar kab ja:yēge
 घर कब जायेगे

18 pa:pa: kab a:yēge
 पापा कब आयेगे

19 sujist kal nahI a:ya: t̃a:
 सुजिस्त कल नहऱ आया: ताः