

**A Study of the Communicative and Linguistic Impairments of the Autistic  
Children**

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Children**

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### **Declaration**

I hereby declare that this thesis is the presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly with proper and due references and acknowledgement. This paper has not been submitted anywhere, either in a part or a whole, for a degree or an award, in this or any other University.

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**August 2013**

### **Dedication**

This paper is dedicated to my respected parents who have always supported and encouraged me at the time of my crisis. I am always grateful to them for their support, cooperation and affection.

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My first and foremost thanks go to the Almighty for enabling me to complete this research. I would also like to thank and express my gratitude to my supervisor Ms. Shenin Ziauddin for her invaluable assistance, guidance and most importantly for the mental support for writing this paper. I am also indebted to her because she is the one who encouraged me to do my research on this topic. My sincere thanks also go to the schools, authorities and teachers for giving me the opportunity to do the survey, which was required for the successful completion of this paper.

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### **Abstract**

This research attempts to find out diverse language and communication impairments of the autistic children. These children have problems in phonology, syntax, semantics, morphology and so on. Again, they also experience different types of difficulties in their everyday discourse. The lack of the theory of mind is considered to be one of the most significant reasons behind their communication impairments. Along with this theory, other theories from Psycholinguistics and Discourse Analysis are used to identify and explain the impairments. For the empirical data, a survey was conducted with the use of both qualitative and quantitative method. This paper concluded with some proposals on what steps should be taken to overcome the limitations which were found during the research.

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## **Chapter 1: Introduction**

### **1.1 Introduction**

There is hardly anyone who has not heard about autism but people's knowledge about autism is very much superficial. The whole sphere is known as Autistic Spectrum Disorder (ASD). There are some further divisions within this spectrum, such as Asperger Syndrome (AS), High Functioning Autism (HFA), Classic Autism and so on. However, there is a debate among the specialists whether these syndromes represent different disorders or are variants of one condition. AS additionally requires an age appropriate language development and a normal intelligence. The concept of HFA refers to a form of autism without mental retardation, but with a clear impairment in social interaction and social skills at an early stage in development. (Baron-Cohen, 2008, p.17-18). Moreover, Classic Autism incorporates both language and communication difficulties with language delay and problematic communication ability. As the focal point of this paper is on the communicative and linguistic impairments of the autistic children, much attention will not be paid on the medical and neurological side of autism which mostly deals with the differences among AS, HFA or Classic Autism but the main focus will be on the Classic autism because it covers both the areas of the research which are the linguistic and communicative difficulties of the autistic children. Language and communication difficulties are interrelated because both the language development and communication competence influence each other. Half of all the autistic population is affected by one type of language impairment or other. This language impairment covers almost every aspect of language, for example pragmatic, syntactic, lexical, phonological, morphological, phonetics and so on (Belkadi, 2006, p.1).

Moreover, language development is also related with the communication skills because sometimes the lack of communication can be an obstacle to the improvement of language. The

autistic children have severe problems in interacting with other people and initiating and continuing any conversation because they lack the conversational conventions. Again, the lack of the theory of mind is another important reason for their communicative impairments. It is because, theory of mind helps people in understanding and predicting others' behavior and at the same time, expressing their own to other people (Miller, 2006, p.142-143). As the autistic children fail to do so, they cannot get themselves into any conversation or cannot continue a conversation. The language and the communication problem can be diagnosed with "A triad of impairments - impairments in social interaction, impairments in verbal and non verbal communication and an inappropriately restrictive behavior" (Belkadi, 2006, p.3; Kjelgaard & Tager-Flusberg, 2001, p.2). Therefore, in this paper, impairments in communication skills and language development of the autistic children will be discussed.

### **1.2 Objective of the study**

The objective of the study is to find out the communicative and linguistic impairments of the autistic children which will help to identify the reasons behind these impairments.

### **1.3 Significance of the study**

If the problems related with different linguistic features; such as pragmatic, syntactic, lexical, phonological, morphological, phonetics can be identified, then it will help to design the materials for the teaching of the autistic children. Moreover, necessary steps can be taken to initiate and improve the communication skill of the autistic children only when the difficulties that the autistic children experience will be acknowledged. Therefore, if from the very beginning it can be recognized what are the difficulties that the autistic kids experience with language and communication and start dealing with them, then it can be hoped that at one level it would enable them to use language and interact with people like other normal kids. It can open a new pathway

of hope for both the autistic kids and their parents. It will also raise awareness among the general mass that they should facilitate every possibility to create an environment which will render support and encourage to the autistic children.

#### **1.4 Research questions**

1. What are the language impairments of the autistic children?
2. What kind of communicative difficulties do the autistic children experience?
3. What are the impacts that the theory of mind has on the communication impairments of the autistic children?

#### **1.5 Limitations of the study**

- There are very few schools for the autistic children.
- The school authorities are not helpful or co-operative. They are reluctant to give permissions for the survey.
- The parents also do not want to talk about their experience about how they deal with the autistic children. It is difficult to conduct a survey with the teachers because they hardly get any free time to fill a questionnaire or give an interview because they always have to be with the students. Otherwise, it is very difficult to control them without constant supervision.

## Chapter 2: Literature Review

Baron-Cohen, Leslie and Frith (1985) said that childhood autism is a serious developmental disorder and it is a rare condition. It is such a disorder that affects both language and communication skills of the children. Language delay and language disorder are very common among the autistic children (p. 37). Moreover, difficulties in social interaction and lack of the theory of mind affect the communication skills.

### 2.1 History of autism

The term 'autism' is derived from the Greek word 'autos' which means 'self'. It is a well-chosen word because people suffering from autism and Asperger Syndrome have profound difficulty in understanding and appreciating other people's ideas, beliefs and perspectives, as if one's own perspective is the only true and correct view (Baron-Cohen, 2008, p.16). Paul Eugen Bleuler, a Swiss psychiatrist was the first one who used the term 'autism'. However, there are differences between Kanner's and Bleuler's use of the meaning of 'autism'. Leo Kanner is the child psychologist who first explained the 'classic autism' in 1943. He used the term to explain the clinical condition of the children but Bleuler used the term for the patients in the early adolescence and adulthood (Blake, Hoyme and Crotwell, 2013, p.58-59)

**Leo Kanner's Classic Autism:** Classic autism is also sometimes called 'Kanner's autism' after Leo Kanner who was a child psychiatrist. Blake et al. (2013) argued that Kanner had first described these children in 1943 by publishing a clinical report entitled "Autistic Disturbance of Affective Contact". He recognized 11 children in his clinic in Baltimore who had what he called 'autistic aloneness', showing so little interest in people that they could be considered as the furniture in his office. All of them shared the same types of behavior, interest or language delay and disorder. The children were extremely aloof and autistic and they refused

to being contacted by their parents, doctors and preferred to be alone (p.58-59). Baron-Cohen (2008) also added that they had difficulties in anticipating how someone will feel or what they might think, knowing how to react to another person's behavior. They also shared the difficulties in reading other people's emotional expressions and accepting that there may be other perspectives, not just their own correct perspective. They tended to use speech inappropriately in the social context and only understood the literal meaning of the speech. Among the language disorders, there is the language delay because there were some children who did not have the obvious language until age 3. Some of them had the echolalic speech, inappropriate intonation and faulty sentence structure and the incorrect use of personal pronouns. However, echolalic speech, language delay and below average IQ or learning disabilities are more typical in Classic autism than Asperger syndrome (p.17-19).

**Bruno Bettelheim's Parentectomy:** In the 1960s, he portrayed the autistic kids as living in the 'glass of bubble' that is unreachable. He viewed autism as a reaction to an 'unaffectionate maternal relationship'. His controversial view led to a form of treatment called 'parentectomy' which refers to the idea of removing the child from his or her parents, in the hope that the child's social development would recover and flourish with foster parents who could be more affectionate. However, his ideas and treatments created huge controversy and fell into disrepute when it was recognized that removal of the child from the biological parents did not help for an obvious improvement in the child's social development. It was also said that that the parents of children with autism were no less caring and affectionate than other parents (Baron-Cohen, 2008; Blake et al., 2013).

**Niko Tinbergen's Holding Therapy:** Nobel Prize-winning ethologist Niko Tinbergen reinforced Bettelheim's view in his 1983 book. He argued that any emotional trauma that

disrupts the child's primary attachment to their mother; for example brief separations on a long car journey for a particularly anxious child could cause autism. Though many children with autism showed high level of anxiety, there was no proof or evidence for his view that the autism itself arose following a trauma of some kind. He also introduced the controversial treatment called 'holding therapy' that is the forced hugging to break the tendency of child's repulsion to being touched or held or hugged. However, this therapy has been questioned on ethical grounds because often the child finds it very distressing to be forced into social contact in this way (Baron-Cohen, 2008, p.20-21)

**Hans Asperger's Asperger Syndrome:** Blake et al. (2013) talked about an Austrian pediatrician Hans Asperger who in 1944 picked out a different kind of children those who are slightly different from Kanner's autistic children. Asperger's report was published in German language and Lora Wing brought Asperger's ideas to the English-speaking world in 1981, in her article in *Psychological Medicine*. Asperger syndrome is also known as High- Functioning Autism (HFA) because people with HFA are deemed to be cognitively "higher functioning" (IQ>70) than other people with autism (p.59). There are also some similarities among the children of AS or HFA and autism; such as they favor to be alone and do not like to participate in play with their siblings or friends and they also have problems in communicating with others. However, the most significant differences are that children suffering from AS do not have any language delay, they have precocious vocabulary development and have an IQ in the average range or above unlike the other autistic kids. These children have less severe linguistics developmental delays and can use grammar appropriately but they have problems in understanding figurative language, irony, humor, sarcasm and so on. Nevertheless, these difficulties in understanding non-literal sequences, social interaction and the restricted and

repetitive pattern of behavior can also be found in other children with autism (e.g., Classic autism) (Baron-Cohen, 2008, p.22-23).

## **2.2 Communication impairments**

Language and communication impairments are closely related with each other. Because of language difficulties, autistic children face problems in communicating with other people. Again, the lack of the theory of mind is responsible for the primary impairments in pragmatic aspects of language and it also makes it difficult for the autistic kids to use language to communicate effectively in a range of social contexts (Tager-Flusberg, 1999, Primary Deficits in Autism, para. 1). That is why, it can be said that it is really impossible to talk about language or communication difficulty individually without the help of each other.

### **2.2.1 Problems in social interaction**

Autistic children have severe impairments in social interaction, and often have difficulties in establishing and maintaining relationships. Baron-Cohen (2008) talked about the fact that children with HFA or AS usually have a rich knowledge of vocabulary and even after that, they have difficulties in the social use of language. Again, other autistic children with Kenner's autism or Classic autism have impairments in communicative skills along with their language delay and language disorder. Therefore, it can be said that almost all the children from ASD have problems in communication (p. 17-18). Children with autism love to live in their own life by isolating them from the rest of the world. They seem caught up in a private world in which communication is unimportant. This is not an intentional action but rather an inability to communicate (Alberta Learning, 2003, p.9).

Wing (1988) regarded social impairment as the core symptom of such disorder. Children with this social impairment are characterized by a triad of deficits in social recognition, social

communication and social understanding. They have difficulties in comprehending verbal information, following long verbal instructions and remembering a sequence of instructions (as cited in Bishop, The Notion of an Autistic Continuum, para.1). They fail to understand the metaphorical or hypothetical meaning of a conversation because they always comprehend the meaning of any conversation from the literal perspectives (Belkadi, 2006, p.4).

They have limited social interactions or a rigid way of interacting with others (Tager-Flusberg, 1999, Theory of Mind and Social Deficits in Autism, para 2). Sometimes, it can be considered as an inability to extract social information from the social interaction and use appropriate communication skills to respond. Understanding social situations requires language processing and nonverbal communication, which are often areas of deficit for people with autism disorders. They may not notice important social cues, e.g., tone of voice, facial expressions. They tend to have difficulty using nonverbal behaviors and gestures in social interaction, e.g., eye contact, body posture, and they may have difficulty reading the nonverbal behavior of others (Alberta Learning, 2003, p.11). It added that the quality and quantity of social interaction occurs on a continuum. Social interaction can be classified into three subtypes along this continuum. They are:

i) Aloof: Those who show no interest or concern in interacting with other people except for when necessary to satisfy their personal needs; they may become agitated when people want to get closer to them and may reject unwanted physical or social contact

ii) Passive: Those who do not initiate social approaches but will accept initiations from others

iii) Active: Those who will approach for social interaction but do so in an unusual and often inappropriate fashion (Alberta Learning, 2003, p.12).



Autistic children may demonstrate social behavior that fits into more than one subtype.

**a) Interactionist approach of social interaction:** The importance of social interaction was also emphasized by psychologist Les Vygotsky. He argued that language develops primarily from social interaction. As a result, in a supportive environment where interaction can take place easily and frequently, children are able to advance to a higher level of knowledge and performance. He referred to this place as ‘Zone of Proximal Development (ZPD)’ where children can enhance their linguistic level more than what they can do on their own independently (Lightbown & Spada, 2006, p.20). Therefore, According to the social interactionist approach of language development, children acquire language through ongoing interactions with conversational partners in everyday contexts. However, as the autistic children cannot take part in everyday social interaction, their language development is slow and faulty (Haebig, McDuffie, Weismer, 2013, p.57).

**b) Connectionist approach of social interaction:** The theory of Connectionism also fails to suit in the language acquisition process of the autistic kids. The connectionists argue that what children need to learn is essentially available to them in the language they are exposed to in their surroundings. Jeffery Elman and his colleagues explain language acquisition in terms of how children acquire links or ‘connections’ between words and phrases and the context in which they fit in. They gave emphasis on this idea of Connectionism because it helps the children to connect the word or phrase and its meaning to a specific event or object (Lightbown & Spada, 2006, p.23-24). However, autistic children have difficulties in establishing this connection. It is because, they hardly get into any conversation and relate the word, phrase or sentence with the topic or context of the discussion. Again, they have deficits in paying attention to relevant cues and information and in receptive language. As a result, they cannot pay attention to the inputs

that they are getting from the environment and connecting them with their meaning according to the context (Alberta Learning, 2003, p.10-14).

**c) Behaviorist approach of social interaction:** Behaviorist approach is important to comprehend the significance of social interaction and communication. Recently, Applied Behavior Analysis (ABA) has been used as a teaching method for teaching children with ASD. The purpose of ABA in programming for ASD is to reduce some of the disruptive behaviors in individuals with autism, and to teach communication, social skills, play and self-help skill. This approach can act as a significant method to improve the communication and interaction skills of the autistic children (Autism Speaks, 2010, p.17-18). Verbal behavior is another program prompted by both ABA and Skinner's 'Verbal Behavior' analysis. Verbal behavior is defined as behavior that is mediated by the behavior of another person. This means it is what we do in most of our interactions with other people. Therefore, it can be said that verbal behavior is communication (Schlinger, 2008, p.335). As a result, it gives more emphasis on the functional use of language and that is why verbal behavior uses terms such as mands (requests), tacts (labels) or intraverbals (answering questions and responding to another) (Cruttenden, 1979, p.99). Verbal behavior includes many different modalities, including speaking, using gestures, use of sign language, use of picture exchange communication systems, and the use of various augmentative and alternative communication devices. Mirenda (2003) defined that Augmentative and Alternative Communication (AAC) is a process that is usually used for the autistic children to supplement (i.e., augment) their existing speech or to act as their primary (i.e., alternative) method of expressive communication. There are two types of AAC techniques. One is unaided communication which does not require any equipment that is external to the body and involves the use signs and gestures. Another is aided communication that incorporates devices that are

external to the individuals who use them; such as communication books, PECS and involves the use of symbols such as photographs, line drawings, letters, and words (p.203-204). She also mentioned about PECS and by this PECS, learners are taught to exchange symbols for desired items rather than to point to them on a communication display (p. 206).

### **2.2.2 Difficulties in the practicalities of conversation**

Autism impairs the ability to orient, interpret and respond to social and physical environments, and specifically to participate in face-to-face interaction. Solomon (2004) argues in his article, “This ability is profoundly important for taking part in everyday narrative discourse where conversational partners are expected to coordinate their contributions with those of their interlocutors in a recognizable, reciprocal, practice-driven way” (p. 254).

**a) Characteristics of discourse analysis and pragmatics:** They lack the characteristics of pragmatics or discourse analysis which study language’s relation to contextual background features (Cutting, 2008, p.2).

**i) Context:** Context is the most important feature of pragmatics and discourse analysis. They study the meaning of a word in a context and how the knowledge of the time and place in which the words are uttered can influence the communication and the meaning of the word. Both the pragmatics and discourse analysis give more importance on the meaning of the words in interaction and how the speaker’s meaning is dependant on assumption of knowledge which is shared by both speaker and listener (Cutting, 2008,p.2). However, autistic children fail to understand the meaning of the word from the context. As they lack are incapable of understanding other people’s belief or perspective, they cannot understand what the speaker intends to mean by using a certain word in a certain context (Baron-Cohen, 2008, p.18; Tager-Flusberg, 1992, p.162).

**ii) Text:** Text is the next crucial factor of both pragmatics and discourse analysis. They concentrate on the meaningful and unified language of a text. Discourse analysis calls it 'coherence' and pragmatics calls it 'relevance' (Cutting, 2008, p.2-3). Both of this 'coherence' and 'relevance' lack in autistic children's communication. Solomon (2004) argued that they cannot keep talking on the same topic and most of the time, their utterances or sentences are not related with each other. They can never be 'on the topic' but are always 'off the topic'. Moreover, they keep making irrelevant comments during the conversation. Their contributions are 'off the wall' and have little to do with the interaction and much to do either with the child's own idiosyncratic 'special interests' or with some unrelated, tangential content (p. 255 ).

**iii) Function:** Function is another feature of pragmatics and discourse analysis that refers to the idea of speaker's short-term purposes in speaking and long terms goals in interacting verbally (Cutting, 2008, p.3). Autistic children talk to fulfill their short time purpose but they do not have any long-term goals. They have a tendency to use language to have needs met but other than that, they do not have any other social or long-standing purpose (Alberta Learning, 2003, p.10).

**b) Turn taking and adjacency pair:** Conversation analysis is closely related with discourse analysis. It mainly deals with the data from the real conversation and examines the language of that conversation. Turn taking and adjacency pairs are important features of conversation analysis. However, both of them lack in the speech of the autistic children. Turn taking is important to manage the cooperation during the conversation. Usually only one-person talks at a time and the others talk when their turns come (Cutting, 2008, p.27). Autistic children do not follow the turn taking policy. They suddenly start talking during a conversation when someone else is talking and they also interrupt the conversation inappropriately (Belkadi, 2006,

p.4-5). Moreover, in a discourse, the utterance of one speaker makes a certain response of the next speaker. This includes question-answer, offer-accept, blame-deny and so on (Cutting, 2008, p.28-29). However, autistic children do not have the adjacency pair in their conversation. They do not greet others in response to the greetings or they do not accept any invitation or deny any blame.

**c) Maxims of the Co-operative Principles:** Grice formulated a general principle which participants will be expected to observe in a conversation. Under the assumption of this general “Cooperative Principle”, Grice distinguished four categories: Quantity, Quality, Relation and Manner (Cutting, 2008, p.34-35). These are also known as Gricean Maxims and all four of them are absent in the autistic children’s communication. Surian, Baron-Cohen and Lely (1996) found that the autistic children fail to grasp the subtleties of the maxims of Quantity, Quality, Relation and Manner and apply it in different contexts. It is because in case of quantity, either they will give more information or less information than the required information. The maxim of quality is also flouted because they are not sincere or concerned about what they are talking about and sometimes they talk out of their imagination which does not have any evidence. Most of the time, they cannot keep pace with the running conversation and they comment about sometime which is not at all related with the topic. Therefore, they even have difficulty in following the relation maxim. The last maxim which is manner is also violated in the conversation of the autistic children. They cannot follow an orderly conversation and their speeches are ambiguous and unclear (p. 64-66).

**d) Politeness strategies:** Another important feature of discourse analysis which is politeness is also missing in autistic children’s regular conversation. Brown and Levinson (1987) analyzed that in order to enter into social relationship, we need to acknowledge and show an

awareness of the face of the people that we address. It is a universal characteristic across cultures that speakers should respect each other's expectations and feelings. They outlined four types of strategies to avoid Face Threatening Acts (FTAs) (as cited in Cutting, 2008, p.43).

**i) Positive politeness:** Speakers can redress the threat with a positive politeness and it is used to make the hearer feel good about himself, his interests or possessions, and is most usually used in situations where the audience knows each other fairly well (Cutting, 2008, p.43; Nor & Aziz, 2010, p.71). It gives emphasis on the hearer's positive face that includes the need to be accepted or liked by others and treated as a member of the group.

**ii) Negative politeness:** To deal with the hearer's negative face, negative politeness is performed by the speaker. By having a negative face, the hearer shows his/her need to be independent, have freedom of action and not be imposed on by others (Cutting, 2008, p. 43; Nor & Aziz, 2010, p.71). In this politeness, the speaker tries to minimize the imposition on the hearer by requesting and apologizing to him/her and providing him/her with the freedom of action.

**iii) Bald on-record:** If a speaker makes a suggestion, request, offer or invitation in an open and direct way, then the speaker is doing an FTA bald on record. This strategy is most often utilized in situations where the speaker has a close relationship with the audience, such as family or close friends (Cutting, 2008, p.44).

**iv) Off record:** This strategy uses indirect language and helps the speaker from being blamed to be imposing on the hearer. In this case, the speaker asks for any help indirectly instead of imposing the request to help him/her directly on the hearer (Cutting, 2008, p.44).

However, except the bald on-record, all other three FTAs are absent in autistic children's interaction. As they cannot understand the postures or the facial expression of the hearer which represents the hearer's thoughts, they never act according to the facial representation of the

hearer. They also do not request indirectly but always ask for help in a direct manner without showing any apology or concern for the hearer (Alberta Learning, 2003, p.10; Belkadi, 2006, p.4).

### **2.2.3 Theory of mind**

One of the most important developments in the childhood is the social cognition and the theory of mind is closely related with the development of social cognition. It is also essential for communication and linguistic competence. The lack of the theory of mind is mostly responsible for the communication impairments of the autistic children. Miller (2006) explained how the theory of mind helps children to get along with other people and understand things from someone else's perspective other than their own. He also added that in typical development, theory of mind is so closely connected with the development of communication and language that we often do not recognize their interdependence. In children with developmental disorders, such as autism spectrum disorder, deficits in language and/or theory of mind may draw closer attention to the relationships between them (p.142). Miller (2006) also stated in his article that theory of mind refers to the idea of understanding different mental states—such as belief, desire, and knowledge—that enables us to explain and predict others' behavior. Therefore, it can be said that people use theory of mind to explain their own behavior to others, by telling others what they think and want, and how they interpret other people's talk and behavior by considering their thoughts and wants (p.142). Again, Piaget's preoperational stage of cognitive development also deals with the fact that within 2-7 years, the children start understanding that other people share different viewpoints than their own (Bartolotta & Shulman, 2010, p.38). Nevertheless, because of the absence of the theory of mind, these autistic kids fail to do so.

#### 2.2.4 Retrospect

The history of the theory of mind actually begins with Swiss psychologist Jean Piaget. Flavell (2004) mentioned in his article, “A central Piagetian claim was that children begin development by being cognitively egocentric. Piaget and his colleagues used egocentrism and other concepts to interpret their developmental studies of a wide variety of social-cognitive topics” (p. 275). He observed infants and children during their plays and their interaction with both object and people. He found the development of their cognitive understanding of such as objects permanence (knowing that things hidden from the sight are still there) or the stability of quantities regardless of changes in their appearances (knowing that ten coins spread out to form a long line are not more numerous than ten coins in a tightly squeezed line). This development in social cognition is built on the interaction between the child and the things that can be manipulated or observed (Lightbown & Spada, 2006, p.20).

The second wave of theory and research in this general area was the extensive work on metacognitive development that began in the early 1970s. Surveys of this large literature include Brown, Bransford, Ferrara, and Campione (1983), Flavell, Miller, and Miller (2002), Kuhn (1999), Moshman (1998), and Schneider and Bjorklund (1998). The majority of developmental studies classified as metacognitive have investigated children’s metamemory, which deals with their knowledge about variables affecting memory performance and, especially, their knowledge and use of memory strategies. However, the term has also been applied to numerous studies of children’s cognition concerning comprehension, communication, language, perception, attention, and problem solving (Flavell, 2004, p.275).

The 1978 issue of *Behavioral and Brain Sciences*, Premack and Woodruff reported some research to test whether chimpanzees had what they called a theory of mind. For this, they



followed a procedure which can be classified as ‘false belief’ which has already been used several times to test the theory of mind of the autistic kids. They used the following technique to test the chimpanzees. The subject animal sees another individual put an object in container A and then leave the scene. The subject then sees someone else transfer the object from container A into container B while the individual is still absent. The subject animal should then be credited with some understanding of belief if it acts as if it expects that the returning individual will search for the object in A rather than B (as cited in Flavell, 2004, p.276). These ideas helped in the research expression in the early 1980s by two Austrian psychologists, Josef Perner and Heinz Wimmer (Flavell, 2004, p.276).

The final and the most obvious contribution in the development of theory of mind was done by Baron-Cohen et al. in 1985 when they presented the fact that how the linguistic and communicative incompetence of the autistic kids are closely related with the theory of mind. They stated in the article that the cognitive deficit could explain a crucial component of the social impairment in childhood autism (p.37). They also added that the autistic kids sometimes treat both the object and people in the same manner. The autistic children are unable to impute beliefs to others and are thus at a grave disadvantage when having to predict the behavior of other people. The main symptom of autism and which can be easily identified is the impairment in verbal and nonverbal communication. This impairment is part of the core feature of childhood autism that is the profound disorder in understanding and coping with the social environment (Baron-Cohen et al., 1985, p.37-38).

### 2.2.5 Different methods of examining the theory of mind

To examine children's theory of mind, different experiments have been used in different times. However, in most of the cases, autistic children have failed to pass these tests of theory of mind. Some of these tests are briefly explained here.

**a) Difference between representation and reality:** One of the most common techniques for this experiment is the appearance reality task and it contains deceptive objects (Miller, 2006, p.143). For example, a sponge is painted to give it a look of a brick and shown it to the kids but they are not allowed to touch it. Before being allowed to touch it, when they are asked what thing it is, they will reply that it is a rock. However, when they will be allowed to touch and manipulate it, they will say that it is a sponge. Two test questions can be asked then: 'What does it look like?' and 'What is it, really and truly?' Autistic children will reply to both questions that it looks like a rock and it is a rock. It is because they are unable to change their mind and idea about the object according to the changing circumstances. They cannot differentiate between the representation and the reality and they think that what they are seeing is the only correct thing (Miller, 2006, p.144). Again, this same task can also be used for the pretend play where the kids pretend that the sponge is a rock. In this case, they can distinguish between an object – the sponge – and thoughts about the object – the sponge as a rock. Autistic kids will also fail to do that because they lack that thought process which helps the kids to assume that the sponge is actually a rock. This difficulty in interpreting the reality causes communication problems in autistic kids (Astington & Edward, 2010, p.2).

**b) False-belief task:** Another important task introduced by Baron-Cohen et al. is the test of false belief. It refers to the idea that, "the understanding that a person may have a belief (or representation) that is different from reality and will act in accordance with that belief" (Miller,

2006, p.144). In this test, two dolls were used named Sally and Anne. Sally first placed a marble into her basket. Then she left the scene, and the marble was transferred by Anne and hidden in her box. Then, when Sally returned, the experimenter asked the critical Belief Question: ‘Where will Sally look for her marble?’ If the children point to the previous location (basket) of the marble, then they pass the Belief Question by appreciating the doll’s now false belief. If however, they point to the marble’s current location (box), then they fail the question by not taking into account the doll’s belief. The study found that 16 out of 20 (80%) autistic children failed to answer the Belief Question and they consistently pointed to the place where the marble really was. They pointed to the box which was the actual place of the marble and they thought that the doll Sally would look at the box for the marble instead of the basket. The autistic children did not appreciate and understand the difference between their own and the doll’s knowledge and belief. That is why they also fail to engage themselves in a conversation because they are unable to understand the speaker’s perception and thoughts. Baron-Cohen et al. (1985) concluded that, “as a result of this the autistic subjects are unable to impute beliefs to others and are thus at a grave disadvantage when having to predict the behavior of other people.” (p.43).

**c) Joint attention:** Joint attention is another important behavioral development in the early childhood which is closely related with the theory of mind. It usually emerges between 6 and 12 months is the capacity of an infant to coordinate her attention with a social partner along with an object or event. As a result, joint attention incorporates triadic coordination or sharing of attention among a child, another person and an object or event. Tomasello (1995) found that by 9 months, infants begin to share with another person the experience of attending to something and by this way, joint attention helps the kids to establish a social interaction with other people and understand others’ intention. A communicative act demonstrates the communicator’s intention to

single out a very small subset of these characteristics for the listener to focus on. The understanding of this intentional property of communication comes to fruition in the use of words, which are used to pick out particular aspects of an object or event, such as *red*, or *ball*, or *fast* (as cited in Miller, 2006, p.143). Joint attention ability is positively associated with language gains and social and communication improvements, and imitation ability was also positively associated with later language. Impairment in the joint attention is one of the earliest symptoms of autism. As the autistic children cannot build the coordination with their social partners, they cannot share the experience of attending and pointing out the specific aspect of any object (Miller, 2006, 143).

There are two types of joint attention and they are imperative and declarative joint attention. Charman (2003) in his article differentiated between these two by saying, “*Imperative* triadic exchanges serve an instrumental or requesting function, whereas *declarative* triadic exchanges serve to share awareness, or the experience, of an object or event” ( p. 316). He also added that autistic children show impairment in both of these joint attentions but the impairment in declarative joint attention is more severe than the other one. Most of the cases, the social and communicative impairments result from the lack in the joint attention behavior like the lack of eye contact, gaze monitoring and response to names. These lacks in the joint behavior attention give rise to other impairments in the social interaction which take place in different age periods; such as lack of social smile and facial expression, poor attention, ignoring people, preference for aloneness, lack of eye contact and lack of appropriate gestures (Charman, 2003, p.315-316).

Tager-Flusberg (1999) argued that the failure of attaining these techniques of the theory of mind suggests that the social and communication impairments are unique to autism. Human social behavior depends on the understanding that people with whom they interact are

intentional, mental beings. However, it does not work for the autistic children because for them, “the social world remains complex and hard to negotiate because they have difficulty understanding the reasons for other people’s actions, which may seem highly unpredictable and uninterruptible” (Theory of Mind and Social Deficits in Autism, para 1).

### **2.3 Language impairments**

Tager-Flusberg, Lord and Paul (2005) stated that most of the individuals with autism begin to speak late and develop speech at a significantly slower rate than others. As autism is not usually diagnosed until age 3 or 4, there is relatively little information about language in very young children with autism. They reported that different studies, parents report and video tapes have shown how the autistic kids’ language and communication development are different from other normal kids and they suggest that by the second year of life, the communication of most children with autism is different from other children. For example; as early as 1 year of age, very young children with autism are less responsive to their names or to someone speaking compared to other children and they are also less responsive to the sound of their mother’s voice (p. 344). This language delay and impairment sharply contrasts with Piaget’s preoperational stage of cognitive development. This stage includes the development of vocabulary and linguistic skills. This language development is marked as one of the most important features of the cognitive development process (Bartolotta & Shulman, 2010, p.38). However, the autistic children lack it because they have significant problems in learning language. Another study of Rutter, Mowhood and Howlin shows that the group of autistic population those who have serious receptive language deficits in early childhood, remained more severely language delayed as a whole (as cited in Tager-Flusberg et al., 2005, p.343). Haebig et al. (2013) gave importance on the caring and friendly language and social environment that can play a significant role in the improvement

of the linguistic and communicative skills of the autistic children (p.57). Even the Behaviorist approaches of language learning generally give more emphasis on the role of parental and social approval (Cruttenden, 1979, p.99). There is some optimism that with more children receiving earlier diagnoses and thus better access to early intensive interventions, especially for language and communication skills, the proportion of children with autism who fail to acquire functional language is diminishing (Tager-Flusberg et al., 2005).

### **2.3.1 Language regression**

Another important feature of autism found in childhood is 'language regression'. This feature of developmental regression is unique and specific to autism and that is why it is also known as 'autistic regression'. In this case, normal development is followed by a faltering of skill acquisition and frequent loss of, or failure to use, existing language and social skills. Kurita mentioned that about 25% of children with autism are described by their parents as having some words at 12 or 18 months and then losing them (as cited in Tager-Flusberg et al., 2005, p.342). Generally, this language regression is a gradual process in which the children do not learn new words and fail to engage in communication like the way they may have participated before. Language loss occurred in these children when they still had relatively small expressive vocabularies and before the word explosion (Tager-Flusberg et al., 2005, p.342). At the same time of losing the language, the children also start losing the social skills. Though the skills children with autism may have had before the regression are often minimal, it is still confusing and heartbreaking for parents to watch their children lose any component of language or communicative skill. Language loss can also be associated with non-linguistic regression and some of these include the decay of social skills; such as social withdrawal and lack of social

interest, decreased use of eye gaze to regulate social interaction, loss of gestures such as waving bye-bye and so on (Charman, 2003, p.316).

### **2.3.2 Articulation**

Kjelgaard and Tager-Flusberg (2001) found that among the verbal autistic children, articulation is often normal or precocious. However, the articulation development can be somewhat slower than normal (p.2). Tager-Flusberg et al. (2005) argued that while talking about the articulation problems of the autistic kids, two things are important to remember. First, difficulties in articulation are relatively common in nonautistic children with intellectual handicaps. Second, there are some autistic kids who have been proved as high functioning in the nonverbal tests during the preschool but have significant difficulties in producing intelligible speech by using the correct phoneme with correct articulation . They also reported that one-third of speakers from the ASD had the speech distortion errors on sounds such as /r/, /l/, and /s/ into adulthood, whereas the rate of these errors in the general population is 1% (p. 343-344). The less frequent the phoneme's use in the language, the greater was the number of errors. Again, the absence of intonation and pitch is another important feature of autistic children's articulation because when they articulate any speech, it systematically lack intonation and can best be described as monotonous (Belkadi, 2006, p.7).

### **2.3.4 Use of words**

There are some abnormalities found in the use of the words of the autistic kids. Tager-Flusberg et al. (2005) found that children with autism often fail to use their knowledge of words in a normal way to facilitate or continue a conversation (p.344). There are certain classes of words those are underrepresented in the autistic children's language. For example, Tager-Flusberg (1992) found that the children participating in a longitudinal language study used

hardly any mental state terms, particularly terms for cognitive states (e.g., *know*, *think*, *remember*, *pretend*). They also have difficulties in using social-emotional terms and the lack of the theory of mind is mostly responsible for this. Therefore, it can be said that, while overall lexical knowledge may be a relative strength in autism, the acquisition of words related with mental and cognitive state concepts may be specifically impaired in this disorder (p.162).

One category of impairment known as Pragmatic Language Disorders (PLD) is common among all autistic kids. This PLD includes a low understanding of non-literal sequences, such as metaphors, jokes or irony and a poor command of indirect speech acts such as questions (Belkadi, 2006, p.4). Sometimes they use words or phrases which are the modifications of ordinary word roots or phrases that produced slightly odd sounding, but comprehensible, terms such as “commandment ” for praise or “cuts and bluesers” for cuts and bruises. Pedantic speech and being overly precise in a rather concrete way are also the characteristics of autistic children’s language. Most of the time, they answer to questions by using only one word or phrase instead of saying a full sentence (Tager-Flusberg et al., 2005, p.344-345).

### **2.3.5 Morphology and grammar**

There are very few studies those are done to investigate the grammatical aspect of language acquisition of autistic kids. Several studies have tried to find out the acquisition of grammatical morphology of the autistic kids and it has been found out that autistic children have some specific problems in using different grammatical morphemes. It has been found that children with autism were more likely to omit certain morphemes, particularly articles (a, the), auxiliary and copula verbs, past tense, third-person present tense, and present progressive (Belkadi, 2006, p.5; Tager-Flusberg et al., 2005, p.345). Tager-Flusberg et al. (2005) also found that children with autism were significantly less likely to mark past tense. The children with



autism perform well on the present progressive form but they were significantly impaired on the past tense elicitation trials (p.345)

Moreover, the pragmatic Language Disorder also includes the features of grammatical impairments faced by the autistic kids. For example, personal pronouns reversal-for instance the use of “I” instead of “you” and vice-versa and the misuse of such prepositions as “in”, “on”, “under”, “next to”, before, after and so on (Belkadi, 2006, p.4). Confusion of personal pronouns is another frequently mentioned atypical language behavior associated with autism. When a child asks for a drink for himself, he says, “Do you want a drink of water?” because he does not understand the difference between the personal pronouns of “I” and “you”. Pronoun reversal errors may not occur in all children with autism, but they are more common in individuals with autism than in any other population (Kjelgaard & Tager-Flusberg, 2001, p.2). Moreover, among small groups of young children with autism, all of them went through a stage of reversing pronouns but as they got older, the more linguistically advanced children stopped making these errors. Within autism, difficulty in using pronouns is generally viewed as part of a more general difficulty with deixis, the aspect of language that regulates shifting reference between the speaker and the listener. For example, in labeling a person by name (e.g., “James”), the label remains the same without regard to who is speaking whereas, for pronouns, whether James is referred to as “I” or “you” depends on whether he is the speaker or the listener during a particular conversation. This error in using pronouns results from the difficulty in understanding discourse roles and social communicative functions. Pronoun errors in autism takes place because of the difficulties that children with autism have in conceptualizing notions of self and other as they are embedded in shifting discourse role between speaker and listener ((Tager-Flusberg et al., 2005, p.345-346).

### 2.3.6 Negation

The set of negation utterances were then evaluated using Bloom's (1970) functional categories of non-existence (e.g., *No more cookies; No fever for you*); rejection (e.g., *No, I don't want this; I don't want a snack*); and denial (e.g., *No, not cheese from milk* = cheese isn't made from milk). The children with autism almost never express denial through negation (as cited in Tager-Flusberg, 1999, *Theory of Mind and Language/ Communication Deficits in Autism*, para. 10). Clearly, the primary difference in children with autism is their very rare use of denial negation. This paucity of denial reflects impairments in theory of mind: to deny the truth of another person's statement entails the understanding that the other person may hold different beliefs, or that language is itself a representation of reality, not reality itself. These aspects of mental state understanding are specifically impaired in autism and it is therefore not surprising that this function of language, denial, is almost never used by young children with autism (Tager-Flusberg, 1999, *Theory of Mind and Language/ Communication Deficits in autism*, para. 10).

### 2.3.7 Reading and hyperlexia

Many children with autism have an early interest in letters and numbers, and some learn to read words without any direct instruction. Decoding, or pronouncing written words, and spelling tend to be relative strengths for many individuals with ASD. Some children with autism show remarkable decoding ability. These children are often referred to as *hyperlexic*. They usually begin reading words before they get to school and are obsessive in their interest in letters, writing, and reading. This is very rare among the autistic children and only 5%-10% children show this hyperlexia (Tager-Flusberg et al., 2005, p.354).

Sometimes the hyperlexic autistic children can have other language impairments but have a strong reading ability. They are advanced in word recognition but otherwise have significant cognitive, linguistic, or social handicaps. In some cases, they are obsessive with reading, writing or letters but shows significant discrepancy between strong word recognition and weak comprehension of what has been read. These children with hyperlexia are sometimes the reason of confusion among the parents because their independent, early acquisition of word recognition contrasts so sharply with their severe handicaps in social communication and language learning. Hyperlexia is, to some extent, a “savant” skill, like other special abilities occasionally seen in children with autism (e.g., drawing, calculation, music, calendar calculation), which fails to connect to general intellectual and functional abilities (Tager-Flusberg et al., 2005, p.354).

### **2.3.8 Echolalia**

One of the most salient aspects of autistic children’s language is echolalia. Echolalia is the repetition, with similar intonation, of words or phrases that someone else has said. It can be immediate; for example, a child repeats back her teacher’s greeting, “Hi, Susie,” exactly as it was said to her. It can be delayed, as in the case of a child who approaches his father and says, “It’s time to tickle you!” as a signal that he wants to be tickled, repeating a phrase he has heard from his parents in the past (Tager-Flusberg et al., 2005, p.346). Both the immediate and delayed echolalia serve some linguistic or communicative functions for the autistic kids. Prizant and Duchan (1981) highlighted six communicative functions that they found were served by immediate echolalia: turn taking, assertions, affirmative answers, requests, rehearsal to aid processing, and self-regulation (as cited in Tager-Flusberg et al., 2005, p.346). Again, delayed echoes can be used communicatively to request for the re-creations of the scenes with which the remarks are originally associated, such as a child saying, “You’re okay” in a sympathetic tone of

voice if he falls down. In this case, he has repeated the same phrase that was used by his parents or teachers when he fell down earlier and he actually wants them to recreate the scene by consoling him. Echolalia can also show the linguistic progress of the autistic kids. It was also found that the bedtime soliloquies of an 8-year-old autistic child contained frequent examples of delayed echolalia, which the child used as a base for analyzing linguistic forms that she was in the process of acquiring. Children with autism were most likely to echo immediately questions and commands that they did not understand or for which they did not know the appropriate response (Tager-Flusberg et al., 2005, p.346).

**a) Behaviorist approach of echolalia:** Behaviorism is the theory of learning that was influential in 1940's and 1950's and was introduced by B.F. Skinner. According to the behaviorism theory, imitation and repetition are important and play the significant role in the development of children's language. This theory gives importance to the environment as the source of everything the child needs to learn. Children's attempts and imitation to reproduce the language that they have heard helps them to acquire linguistic knowledge (Lightbown & Spada, 2006, p.10). Autistic children also imitate and repeat what they listen to and it helps them to improve their language because they can get the language input from the environment. In Alberta Learning (2003), it has been said that even though autistic children do echolalia without understanding the meaning or context, this echolalic speech should not be neglected because it shows that children are learning new words. Immediate echolalia is mostly frequent with the autistic kids those who are verbal but have minimal expressive language (Tager-Flusberg et al., 2005, p.346).

**b) Gestalt approach of echolalia:** Echolalia can be seen as the evidence of "gestalt" processing in autism. Gestalt approach has come from the idea of 'Gestalt Therapy' which is a

form of psychotherapy that relates to the process of human perception and believes in the fact that the whole is different from the sum of its parts. The concept of Gestalt psychotherapy was formally developed by Fritz Perls during the 1950s and demonstrated that humans do not recognize objects by its separate elements but organize the objects into significant totalities via the process of perception (“Gestalt Therapy”, 2013, para. 2). Therefore, gestalt approach gives more importance to the totality of an object instead of different separate features of an object. As a result, gestalt form of language is described as organized wholes rather than as of distinct parts, maintaining that the whole is greater than the sum of its parts. Prizant (1984) said that learning language in gestalt form would be learning it in chunks rather than the tiny component sounds and specific meaning of each individual sound or word. Children with autism are especially dependent on the gestalt approach for acquiring language and it is obvious in their dependence on the echolalia. Instead of learning language by acquiring individual phoneme or word, they tend to repeat a whole sentence or phrase (as cited in Tager-Flusberg et al., 2005, p.346).

### Chapter 3: Research Methodology

#### 3.1 The participants

- a. Students: In the research, there were 60 students from 6 different classes. Researcher observed them during the classes and tried to find out about the communication and language difficulties from their conversation with teachers. The age range was from 4 to 12 years old and they were from pre-academic and early intervention sections.
- b. Teachers: All these teachers were given a basic training on how to deal with the autistic or other special kids and had the basic knowledge on different social and psychological difficulties of the autistic children that they face in their day-to-day life. The questionnaires were filled up by 40 teachers and it was possible to get the interview of 12 teachers. Teachers' participation in interview is lesser than the questionnaire because it was really tough to interview the teachers for a long time as each teacher was in charge of each student and they had to spend the whole time with the students from the very beginning to the end of the school time.
- c. Speech therapist: Since there were strict rules and regulations about interviewing the teachers, it was possible to take the interview of only two speech therapists. They talked about the problems in articulation, phonetics, word use and sentence structure of the autistic children.

#### 3.2 The instruments

- a. Questionnaire for the teachers: Questionnaires were distributed among 40 teachers. There were 15 questions and every question except one was multiple-choice questions with Yes, No or No comment. Only one question had the multiple choice with Always,

Sometimes or No comment. They had to tick on the answer which they thought appropriate for the question.

- b. Interview for the teachers: Interview was taken of 12 teachers and 2 speech therapists. There were 6 questions for the teachers and 4 question for the therapists in the interview. They had to briefly explain the answers to justify their responses on different questions.
- c. Observation of the children: In observation, there were 7 classes and among the classes, along with the usual language classes, there were also extra-curricular classes because through different extra-curricular activities, the students were taught different aspects of language and communication.

### **3.3 Method of analysis**

Mixed and triangulation methods were used to find out about the communicative and linguistic impairments of the autistic kids. Questionnaire, interview and observation were done for the research. Teachers participated in the questionnaire and interview and students participated during the observation. The responses to the questionnaire was converted into percentage and the pie charts were made by using Microsoft Excel 2007© to represent the percentage. The questions those were not possible to answer with multiple-choices were incorporated in the interview; such as: *How does the 'Theory of Mind' affect the communicative development of the autistic kids?* or *What types of articulation problems do the autistic children experience?* Observation was done for the empirical research and to find out what are the language and communication problems the autistic children experience in their everyday life.

## Chapter 4: Research Findings and Discussion

### 4.1 Class observation

In total, 6 classes were observed and all of them were pre-academic and early intervention classes. The checklist (see appendix 4) was followed during the class observation. These classes were mainly for the students those who had significant impairments in language and communication. As the students barely talked or communicated with the teachers, much was not found out about the impairments. Different activities were used to teach the students and other than the linguistic and communicative skills, some other social skills were also taught.

**Communication impairments:** As the classes were from the pre-academic and early intervention stages, very few students were found in talking or communicating with their teachers. Communication impairments found among the students include the problem of not responding when they were asked or said something. Again, sometimes suddenly they replied or answered the question which was actually asked long time ago. The tendency of interrupting was also very common among them and the adjacency pair was totally absent. Though they had very limited communication, from time to time, whatever they said to the teachers was totally off the topic or out of the context.

**Language impairments:** The students hardly talked and responded to the teachers or to the researcher. Echolalia was very common among the students because they were repeating exactly the same thing that the teacher told them. They did it sometimes by understanding what the teachers told them and sometimes without even understanding the meaning of it. There was not a single student who used a full sentence. They replied either with just one word or with nodding their head or moving their hands. Whenever they talked, they used future tense and



proper noun instead of using pronouns. Difficulties were found in differentiating /U/ and /Z/ and /e/ and /f/. Again, they never used interrogative sentences to ask questions.

**Activities and skills:** Different activities were used and various skills were taught including:

**a) Extra-curricular activities:** It was the part of their language learning activities. Two days in a week were generally allocated for different types of extra-curricular activities, such as dancing, singing, reciting and so on. The extra-curricular activities class which was observed had the dancing session. There was a trained dance teacher who was assisting the other teachers and students by showing them different dance steps. In that class, the teachers were actually teaching the students the name of different body parts through the dance steps. For example, the teachers were instructing the students to move their legs, feet, hands, fingers or to blink their eyes. It was found that all the students from the extra-curricular activities class were not responding according to their teacher's instruction. Very few students were doing the steps by understanding that which part of the body they were told to move because they knew which one was leg or which one was hand. However, others were simply imitating the teachers because when they were told to stretch their hands without showing them how to do it, they failed to do so. It is because, until then they did not learn the names of different body parts. In that class, there was individual teacher for each individual student. The teachers were showing their respective students the steps by mentioning the name of the body parts repeatedly to stimulate them but the teachers never forced the students to follow their instructions.

**b) Diverse activities for the language class:** Teachers were teaching prepositions and names of different colors and shapes. Teachers drew different shapes (circle, square, triangle, and rectangle) with different colors (red, green, and blue, yellow). Then, they asked the students

to match their color pencils with the correct colored shape which was drawn on their notebook. This same exercise was used to teach them different shapes by asking them to put the correct plastic made shape on the colored shapes of the notebook. These types of techniques for recognizing shapes and colors were used in all language classes. It was known from the teachers that after few days of practice, students can match the colors successfully but they face tough times in matching the shapes. Again, when the angle of the shape was changed, they could not recognize them. For example, usually a student could understand which one was a triangle but when it was drawn upside down, they failed to recognize it. Moreover, instead of learning rhymes from the books, the students were listening to the audio clips of the rhymes and repeating it. Two of the students perfectly recited the rhyme just after listening it in the classroom. The cognitive skills were also taught with the help of the pictures. The teachers were showing them two cards. On one card, it was drawn that the ball was in the box and after looking at that card, the students were putting the ball in the box and on another card it was drawn that the ball was out of the box and after looking at that card, the students were taking out the ball from the box. While showing them the pictures, the teachers were also giving them verbal instructions. Almost every student performed the task successfully. The teachers also tried to make the students do the task without showing them the card and with only the verbal instruction. However, the same students who performed it successfully earlier faced difficulty to do it again without seeing the pictures.

**c) Teaching social skills:** Along with teaching language, the students were also taught the manners of speaking and behaving with other people in their regular classes. They were taught not to interrupt when someone else is talking, to raise their hands when they wanted to say something or to take permissions before going out of the class. They were also taught other

social manners; such as greeting people, giving Salam to the elders, being sympathetic to their classmates when they are hurt, washing hand before and after eating, having prayer before eating and so on. It was found that all the students successfully learned the trend of having prayer before eating. On the other hand, the turn taking tendency and taking permission before going out of the class were absent in nearly all the students. The suddenly interrupted a conversation or left the class whenever they wished.

#### **4.2 Analysis of teachers' interview**

For teachers' interview, there were 6 questions which were asked to 12 teachers and the teachers had to briefly explain the answers.

##### **Question 1**

##### **What is the average age when children can be diagnosed with autism?**

In answer to this very first question all the teachers agreed that within 2 to 4 years children can be diagnosed with autism. If the parents are really caring and conscious, then they can easily understand the symptoms from the very beginning of the 2<sup>nd</sup> year of their children's life. As most of the autistic kids do not start speaking or responding from the ending of their 1<sup>st</sup> year or the starting of their 2<sup>nd</sup> year, parents start realizing that their children are not behaving like the other regular kids. Usually some symptoms are associated with diagnosing the children with autism. When these are present within any child, parents get to know that their children are behaving differently than the other children. These can include not responding to the question or request, no eye contact, lacking in establishing joint attention, eye gazing, repetitive behavior, over stubbornness and so on.

**Question 2****How does the 'Theory of Mind' affect the communicative development of the autistic kids?**

Though all the teachers agreed that the lack of theory of mind has a profound impact on the communicative impairments of the autistic children, three of them argued that if the children can be diagnosed from the very beginning and given proper training, then the difficulties caused by the absence of theory of mind can be minimized. The teachers those who have agreed that the absence of theory of mind is responsible for the problematic communication development had shared the view of Baron-Cohen et al. (1985) that this lack acts as an obstacle for the successful communication. As they do not understand or perceive other people's ideas, thoughts or perspectives, it becomes hard for them to get into a conversation. Sometimes, they hurt people unknowingly by being impolite and saying something rude. For example, one teacher shared the experience of being called 'fat' by her student because the student was unable to understand that to call someone fat was rude and it could hurt someone's feelings. Like the same way, they also do not understand other people's emotion or state of mind. If someone does not answer their question just because s/he is sad or angry, they usually do not understand that and keep asking the same thing repeatedly. Moreover, because of the lack of the theory of mind, the children even cannot talk about their own feelings or state of mind. As they do not understand or infer what the speaker intends to mean or refers to in a conversation, they cannot continue the discussion successfully.

However, those three teachers who thought that with proper training this problem can be overcome to a great extent, had the experience of it. According to them, if the children can receive the guidance from the teachers and parents from the very onset of the autistic disorder, then they can be easily dealt with this communication problem. The more the children will be in

touch and get the opportunity of having conversation with others, the more they will learn about the rules of conversation and will understand how to act according to people's reaction; such as one teacher said that her student used to calling her non stop if she would not respond to her. This behavior has changed and now she calls her teacher three times correspondingly and even after that if the teacher does not respond, she does not bother her anymore. It is because, now she understands that either the teacher is busy or not in mood of responding. The teacher said that she did it intentionally by not answering her at the very first attempt to find whether the student could realize the teacher's mind or not.

### **Question 3**

**How can the supportive and encouraging social and linguistic environment have an impact on the language and communication development of the autistic kids?**

Every teacher agreed on this point that supportive and encouraging environment work as a blessing for the autistic kids and it supports the hypothesis of Les Vygotsky that environment is one of the most important sources for language development. This surroundings that influences the language learning can be considered as the 'Zone of Proximal Development (ZPD)'. Again, this opinion of the teachers also proves that the claim of the Behaviorist approach is correct. It is because this approach places great emphasis on the role of parental and social supervision and approval in language learning. They also talked about some parents those who cannot take this fact easily that their children are special but the only thing they realize is that their children are different or abnormal from others. Even if the teachers, parents or siblings help the autistic children to have a supportive environment, the society of our country still has not build up that mentality to render help and care to the autistic kids and their families. The main problem that can be found is that the autistic children are already very much reluctant to talk to other people

and on the top of that, when they do not get any encouragement or motivation to talk, their existing knowledge of language and communication starts diminishing. Again, after eight years, the development process becomes slower because the development stage gets over. As a result, the initiatives for the improvement of language and communication problems should be taken as early as possible.

Nevertheless, when the teachers and parents try to make them communicate for a long time, some positive changes can be noticed. The children start realizing that when someone asks a question, they need to answer or they need to greet the people. These are the practical use of language that they can learn from practice and training. The more they will get chance to talk to the people, the more words they will be able to learn. All the teachers emphasized on the point that we should ensure such a secure environment for the autistic children where there will be no threat of being teased or bullied. It has also been found that the children of the supportive parents usually come to school with less language impairments and the numbers of non-verbal kids are also fewer in this case. The teachers gave more importance on the parental guidance because they kids spend more time with their parents in home than with the teachers in school.

#### **Question 4**

##### **What types of articulation problems do the autistic children experience?**

Different teachers talked about different articulation problems. Five of them talked about the problems the autistic children face while articulating the Bengali letters /g /, /c/ and /j /. Seven of them said that the autistic children have also problems in differentiating three different palatal /k/, cerebral /l / and dental /m/ and alveolar /U/ and dental /Z/ and /e/ and /f /. However, these articulation problems vary from child to child. It is quite difficult to point out any specific letter because different autistic children can have problems in articulating different

letters. Mostly their main problems are in articulating bilabial and alveolar sounds and the cluster letters. All of them agreed that there is a tendency among some of the autistic kids to pronounce everything in nasal form and they lack intonation when they talk but when they get angry or excited, they use high pitch.

### **Question 5**

#### **What types of difficulties do the autistic children have in word use and sentence structure?**

The verbal kids have very limited vocabulary. All the teachers agreed on this point that the children sometimes use words what they have learnt through echolalia but actually do not know the meaning. That is why, sometimes they use words which do not go with the context. Again, nine teachers talked about the problem that the autistic children do not understand the cognitive terms and their understanding of a word is related with only one specific type of object. For example, when they learn the word 'tree', they think that this word can be applied to only one specific type of tree but they cannot make the generalization of the concept 'tree' which can be applied in different types of plants. Moreover, it was agreed by all the teachers that they also have problems in understanding the metaphorical or hypothetical meaning of word or phrase because and this same opinion was also shared by Belkadi (2006) when he talked about the Pragmatic language Disorder (PLD) of the autistic children.

All of the 12 teachers mentioned that the autistic children have problems in forming sentences. That is why, they hardly utter a full sentence. For example, if the teacher asks a student, "Tumi ki chul achriyecho? (Have you combed your hair?)" In most of the cases, the student will reply either "ha" (yes) or "achriyechi" (combed) but never say, "Ha, ami chul achriyechi" (Yes, I have combed my hair). They also have problems in comparing and asking questions.

**Question 6**

**What are the common grammatical errors found in the autistic children's language? (e.g. using tense, pronouns, subject-verb agreement)**

The most common problem shared by all 12 teachers was in the use of pronouns. The autistic children reverse the pronouns 'I', 'me', 'mine' with 'you', 'your' or 'yours' very frequently. The same problem in using pronouns was also discussed by Tager-Flusberg et al. in 2005 and Belkadi in 2006. That is why they are always taught to use the proper nouns instead of pronouns. For example, instead of saying "Amar khudha legeche" (I am hungry), they will say it by using their name, such as "Samir khudha legeche" (Sami is hungry). Few teachers also talked about the point that the autistic kids have problems with subject verb agreement. In Bengali, they cannot differentiate among "Ami jai" (I go), "Tumi jao" (You go), "She jai" (S/he goes) or "Tini jan" (S/he goes). These differences in verb that take place because of the changes in subject cannot be comprehended by them. As a result, their sentence structure also becomes faulty. Moreover, all the teachers gave their consent on this point that these children have problems in tense and most of the time, they use future tense; such as "Sami basai jabe" (Sami will go home) or "Sami akhon khelbe" (Sami will play now).

**4.3 Analysis of speech therapists' interview:**

There were two speech therapists for this interview and there were 4 questions for them. Among them 3 questions were same as the last three questions of the teachers' interview and one question was newly added only for the speech therapists.



**Question 1****What types of articulation problems do the autistic children experience?**

**Speech therapist 1:** They have difficulties with bilabial sounds like /C/, /E/ or /G/ and with alveolar sounds like /J/, /M/ or /j / because of the sensory problems. They do not understand how to utter the bilabial sounds with the help of two lips because they cannot recognize the system of joining and detaching the lips. Again, in case of alveolar sounds, they cannot understand how to move their tip of the tongue and touch the alveolar ridge. According to her, some articulation problems are due to the sensory motor problems and some are because they face problems in differentiating the sounds. They always have problems with /U/ and /Z/ and they replace the later with the first one. Not all the autistic children lack intonation but some of them and they sometimes use wrong pitch in the wrong place.

**Speech therapist 2:** The autistic children face problems with the velar sounds of /K/ and /M/ because they cannot comprehend the process of taking out the sound from their velum. That is why; sometimes “Kola” (banana) becomes “Tola” (bottom). Again, they also have a tendency to make every sound nasal and cannot pronounce the cluster letters correctly. Like the previous speech therapist, he also mentioned the problems in differentiating same type of sounds like /K/, /l / and /m/ or /U/ and /Z/. About intonation, he said that, even if the children can overcome the articulation problems that they have with different phonemes and sounds, it is quite hard to make them understand about when or how to apply different intonation.

**Question 2****What types of difficulties do the autistic children have in word use and sentence structure?**

**Speech therapist 1:** They never say the full sentence. There are some words they hardly use while forming a sentence. For example, they do not say “diye” (with) in a sentence like “Rimi chiruni diye chul achrai” (Rimi combs her hair with comb) or “theke” (from) in a sentence like “Rimi bottle theke pani khai” (Rimi drinks water from the bottle). Again, they do not understand the word or phrases for jokes or satires and they never use cognitive terms. As they lack theory of mind, they cannot get the concept of thinking or justifying their own ideas and understanding others’ thoughts or perspectives and express them in words.

**Speech therapist 2:** He also talked about the same things of not understanding jokes and cognitive terms or saying the full sentence. He also added that the autistic children sometimes do not understand the interrogative sentences. If the teacher asks, “Mahin ki akhon tiffin korbe?” (Will Mahin have tiffin now?), the student may not reply to the teacher by saying yes or no. However, if the teacher says, “Mahin akhon tiffin korbe.” (Mahin will have tiffin now), then the students will say yes or no. As they have difficulty in understanding questions, they also have problems in asking questions. They also do not understand metaphor or simile, such as “Meyeta dekhte porir moto” (The girl looks like a fairy) because they do not know how to compare a girl with an abstract thing like fairy.

**Question 3****What are the common grammatical errors found in the autistic children’s language? (e.g. using tense, pronouns, subject-verb agreement)**

**Speech therapist 1:** Autistic children have problems in understanding the change of verbs according to the tense. For example, “Ami kheli” (I play), “Ami khelechilam’ (I played) or

“Ami khelbo” (I will play). They also have difficulties in understanding subject verb agreement and they usually use ‘tumi’ in case of everyone. They hardly use ‘apni’ for the teachers and elders. Again, the reversal of pronouns ‘I (ami)’ and ‘you (tumi)’ is universal for the autistic children. That is why, when an autistic kid is hurt and say, “Tumi betha peyacho” (You are hurt), s/he actually means, “Ami betha peyechi” (I am hurt).

**Speech therapist 2:** He also covered the above-mentioned problems of autistic kids discussed by the speech therapist 1. In addition to that, the second therapist also talked about the problems in using prepositions, such as in, on, after, before and so on. For example, “Mahin class a Sejutir aage/pore aseche” (Mahin has come to the class before/after Sejuti). The autistic children’s idea about the concept of this before/after is not clear. They also have the tendency to use the newly learned structure in every word or sentence. If they have learnt the continuous form of the tense; such as “Mahin akhon khelche” (Mahin is now playing), they tend to use it in the place of present or future tense. For example, instead of saying “Mahin washroom a jabe” (Mahin will go to washroom), he will say, “Mahin washroom jacche” (Mahin is going to washroom).

#### **Question 4**

**What procedures do you follow with the autistic children to overcome their language and communication impairments?**

**Speech therapist 1:** First of all, it is needed to be sure whether the autistic child is verbal or non-verbal. There are some kids those who seem non-verbal at the beginning because they have not learnt many words before coming to school but with the help of proper speech therapy, they start talking like the verbal kids. If any kid is verbal, then the most important thing is to keep him in practice with the words s/he already knows. Otherwise, they will gradually forget

those words. In this case, the parents should also be conscious about this thing because if the children will practice those words in school but not in home, then it is of no use. Moreover, the students those who cannot pronounce sounds because of sensory problems, they are also taught how to move different parts of the mouth (e.g lips, tongue) and use them to utter various sounds. Teachers and parents should initiate the communication with the children in such a way so that they can get the chance to use new words along with their already existing knowledge of vocabulary. If the children are non-verbal or reluctant to talk, then the Picture Exchange Communication System (PECS) should be used. In PECS, they are shown different pictures or images of things or activities that they need in their regular life. Therefore, when they need those things or need to perform that activity, they point to those pictures.

**Speech therapist 2:** Dealing with the autistic children differ from student to student. There are some students those who keep saying same word repeatedly just because they are not interested in learning new words. Again, there is the problem of echolalia because sometimes, the autistic kids say a new word because they have heard it from somewhere and echoed it but they actually do not know the meaning and the use of the word. In this case, the teachers should ask him/her the same words after few days to find out whether s/he still remembers the word or it was only an echolalic expression. The symbols can be used for both the verbal and non-verbal children. Instead of teaching them the name of the days in a week by the actual names, seven different symbols can be used to represent seven different days. The teachers or parents should never pressurize the children to talk. Rather, they should create such environment which will facilitate the interaction. Augmentative and Alternative Communication is used for the non-verbal kids. Pictures, symbols are used in it and sign language is also included in it. Different

short sentences (e.g. Amar khudha legeche, Ami baire jabo) are written and put in their personal diary and they use them according to their needs.

#### 4.4 Analysis of teachers' questionnaire

There were 15 questions in the questionnaire that were given to the teachers and 40 teachers participated in this survey.

##### Question 1

**Do the autistic children have below-average IQ and learning difficulties?**

**Table 1**

Answer type	No. of teachers	Percentage (%)
Yes	34	85%
No	6	15%
No Comment	0	0

The response to this very first question proves that the autistic children have below average IQ and they face different problems in learning language. That is why, 85% participants agreed with the fact of the autistic children's below average IQ and learning difficulties and only 15% negated it.

##### Question 2

**Do the autistic children have the lack of interest in other people and prefer to be alone?**

**Table 2**

Answer type	No. of teachers	Percentage (%)
Yes	40	40%
No	0	0

No Comment	0	0
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All the 40 teachers (40%) agreed on the point that autistic children like to live in their own world. They do not like to initiate any conversation with people. This proves Wing's (1988) triad of deficits in social recognition, social communication and social understanding. Therefore, the alienation and aloofness are universal in all autistic children.

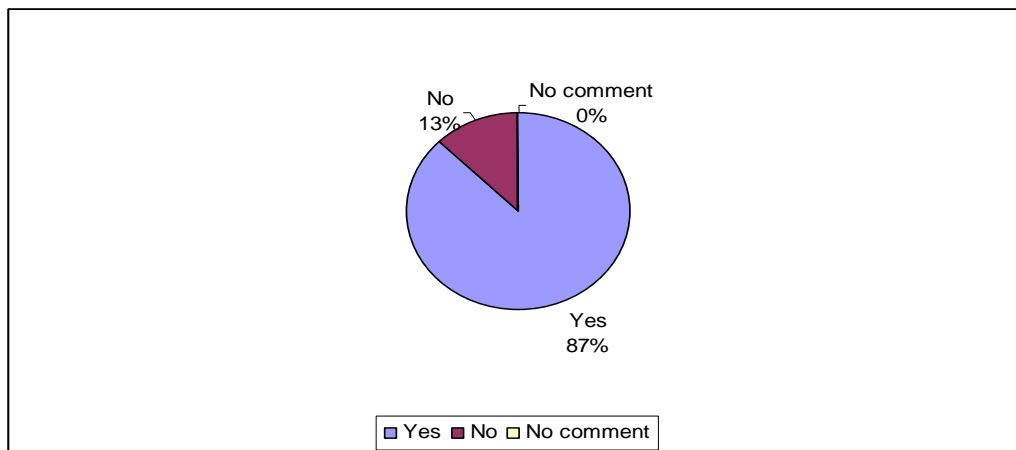
### Question 3

**Does every autistic child lack the 'Theory of Mind'? (It refers to the idea of understanding different mental states-such as belief, desire and knowledge-that enables us to explain and predict others' behavior)**

**Table 3**

Answer type	No. of teachers	Percentage (%)
Yes	35	87.5%
No	5	12.5%
No Comment	0	0

While talking about the linguistic and communicative impairments of the autistic children, the lack of the theory of mind plays the crucial role in it. The response to this question also proves that because 87.5% teachers agreed that the autistic children lack the theory of mind. On the other hand, only 12.5% believed that the autistic children do not lack the theory of mind and this percentage is far less than the believers. Teachers' response to this question is given below in a pie chart.



**Figure 1: Does every autistic child lack the “Theory of Mind”?**

This maximum percentage of response in favor of the lack of the theory of mind of the autistic children proves the argument of Baron-Cohen et al. (1985) and Miller (2006) is correct that the autistic children lack theory of mind. Therefore, it can be said that the lack of this theory of mind is a salient feature of autism.

#### Question 4

**Do you think that the absence of the ‘Theory of Mind’ is responsible for the linguistic and communicative impairments of the autistic kids?**

**Table 4**

Answer type	No. of teachers	Percentage (%)
Yes	35	87.5%
No	5	12.5%
No Comment	0	0

It is believed that as the autistic children cannot understand other people’s mental states because of the absence of the theory of mind, it becomes an obstacle for them for the successful communication with others. At the same time, as they have very little interaction with people,

they are not exposed to the huge realm of vocabulary and they get very few language inputs from their surroundings. The teachers also believed in it and that is why 87.5% teachers agreed that the absence of the 'Theory of Mind' is responsible for the linguistic and communicative impairments of the autistic kids and only 12.5% did not agree with this fact.

### Question 5

**Is language delay common among the autistic kids?**

**Table 5**

Answer type	No. of teachers	Percentage (%)
Yes	36	90%
No	4	10%
No Comment	0	0

In early childhood, autism can be diagnosed when it is found that the children are not using the language the way they are supposed to do it. Even when they learn language, their learning speed is very slow. As a result, 90% teachers also believed that language delay is common among the autistic kids. Only 10% teachers believed it otherwise.

### Question 6

**Is 'language regression' (normal development is followed by the difficulties of skill acquisition and frequent loss of or failure to use existing language and social skills) common among the autistic kids?**

**Table 6**

Answer type	No. of teachers	Percentage (%)
Yes	40	40%



No	0	0
No Comment	0	0

Language regression is an important feature of the autistic children's language. All the 40 teachers (40%) agreed on this point that it is common among the autistic children. They learn some new word, phrases and sentence structure and then after few days they forget them. Along with this language loss, they also experience the loss in social skills. Therefore, Kurita's argument as cited in Tager-Flusberg et al. (2005) that about 25% of the autistic children have some words at 12 or 18 months and then losing them has been proved right.

### Question 7

**Do you think that echolalia is one of the most important features of the autistic children's language?**

**Table 7**

Answer type	No. of teachers	Percentage (%)
Yes	40	40%
No	0	0
No Comment	0	0

Autistic children have the tendency to repeat the words or phrases that they have heard from their parents or teachers and sometimes they do it even without knowing the meaning. It is very common among them and all the 40 teachers (40%) agreed to it. All the teachers' agreement proves that the Behaviorist and Gestalt approach of echolalia are correct. It is because it helps the

autistic children to increase their linguistic elements through imitation and repetition and instead of learning language by bits, they learn it as a chunk.

### Question 8

**Do the autistic children lack intonation in their speech and does it make their speech boring and monotonous?**

**Table 8**

Answer type	No. of teachers	Percentage (%)
Yes	30	75%
No	10	25%
No Comment	0	0

Autistic children talk in the same tone and they do not change the pitch or intonation while they are talking. That is why, their speech sounds dull and boring and machine like. Not all the teachers agreed on this point but 75% teachers agreed that the autistic children lack intonation. On the contrary, 25% teachers thought that the autistic children do not lack intonation and their speech is not monotonous.

### Question 9

**Do the autistic children have problem in expressing mental states terms or the terms for the cognitive states (e.g. know, think, pretend)?**

**Table 9**

Answer type	No. of teachers	Percentage (%)
Yes	39	97.5%
No	1	2.5%

No Comment	0	0
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Autistic children have difficulties in understanding others' thoughts and in expressing their own thoughts. They cannot recognize other people's thoughts, ideas, perspectives and so on. The response to this question proves that this problem is universal to every autistic kid. It is because 97.5% teachers agreed that the autistic children have problems in expressing mental states terms and only 2.5% negated it. Teachers' responses to this question show that Tager-Flusberg's (1992) argument that the autistic children have difficulties in talking about cognitive terms is true.

#### Question 10

**Do they have problems in understanding the non-literal sequences (e.g. metaphor, joke, irony, mockery)?**

**Table 10**

Answer type	No. of teachers	Percentage (%)
Yes	38	95%
No	2	5%
No Comment	0	0

As 95% said 'yes' to this question, it has been proved that autistic children cannot understand the non-literal sequences or any hypothetical ideas. They only understand the literal meaning of words and phrases. This is also one of the most crucial reasons of their communicative impairments. However, only 5% responded 'no' to this question. This finding also supports the above mentioned difficulties expressed by Belkadi (2006) that the autistic

children have impairments in understanding non-literal sequences which is part of their Pragmatic Language Disorders (PLD).

### Question 11

**Do they lack the conversational conventions (e.g. politeness, turn taking, levels of formality)?**

**Table 11**

Answer type	No. of teachers	Percentage (%)
Yes	40	40%
No	0	0
No Comment	0	0

Autistic kids lack the characteristics of pragmatics and discourse analysis. They usually do not follow the conversational principles and they do not understand when and how to talk with different people in different circumstances and contexts. All the teachers (40%) agreement on this point proves that the autistic children have problems in maintaining the rules of conversation. They fail to maintain the formality and the topic in any conversation and do not follow the procedure of turn taking, adjacency pair and politeness. So, the findings of Alberta Learning (2003) and Belkadi (2006) about the absence of conversational conventions of the autistic children has proved correct during the research.

### Question 12

**Is the 'Triad of Impairments - impairments in social interaction, impairments in verbal and non verbal communication and an inappropriately restrictive and repetitive behavior' common among the autistic kids?**

**Table 12**

Answer type	No. of teachers	Percentage (%)
Yes	36	90%
No	4	10%
No Comment	0	0

Along with Belkadi (2006) and Kjelgaard and Tager-Flusberg (2001), many others have argued that the impairments in interaction, verbal and non-verbal communication and behavior are common among all the autistic kids. The teachers also consented on this fact and 90% of them believed in this. Only 10% responded otherwise because they thought that the ‘Triad of Impairments’ is not present in all the autistic children.

**Question 13**

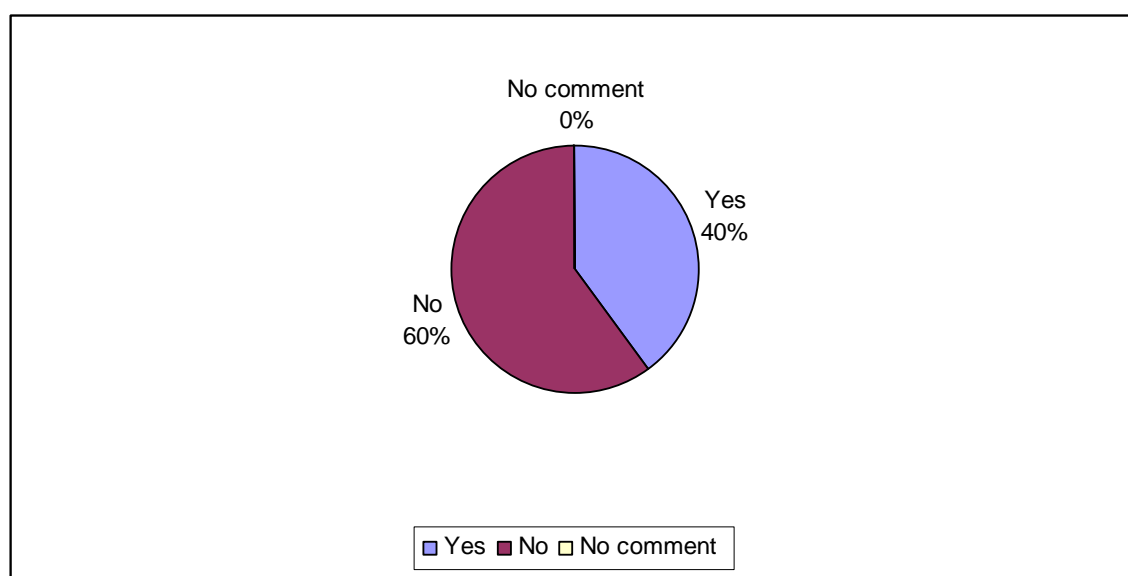
**Have you ever found any kid who is hyperlexic (those who begin reading words before they get to school and are obsessive in their interests in letters, reading or writing)?**

**Table 13**

Answer type	No. of teachers	Percentage (%)
Yes	16	40%
No	24	60%
No Comment	0	0

This exceptional quality of being hyperlexic is rare among the autistic children. Though most of the time they are obsessive about a certain and specific thing, this type of obsession is not very common but again, there are some kids who were found hyperlexic from the very

beginning of their lives. However, only 40% teachers said that they had found hyperlexic kid/s in their teaching life. The percentage of the teachers (60%) those who never had hyperlexic kid/s is/are higher than those who had this type of kid/s. The percentage of how many teachers have and have not found hyperlexic child is shown below with a pie chart.



**Figure 2: Have you ever found any kid who is hyperlexic?**

Most of the teachers' responses that they never had hyperlexic students stand with the findings of Tager-Flusberg et al. (2005) because they also commented on the fact that this quality is very rare among the children and only 5%-10% children actually show hyperlexia.

#### Question 14

**Is it possible for the autistic kids to remain mute for the rest of the life?**

**Table 14**

Answer type	No. of teachers	Percentage (%)
Yes	30	75%
No	10	25%
No Comment	0	0

While answering to this question, 75% teachers agreed that there is a chance that the autistic children remain mute for the rest of their lives. These kids are not born as mute, they just can never acquire the speaking skill through out their whole lives. They are called the non-verbal autistic children. On the other hand, 25% teachers thought that if not born as mute, then it is not possible that the autistic children will remain mute for the rest of the life.

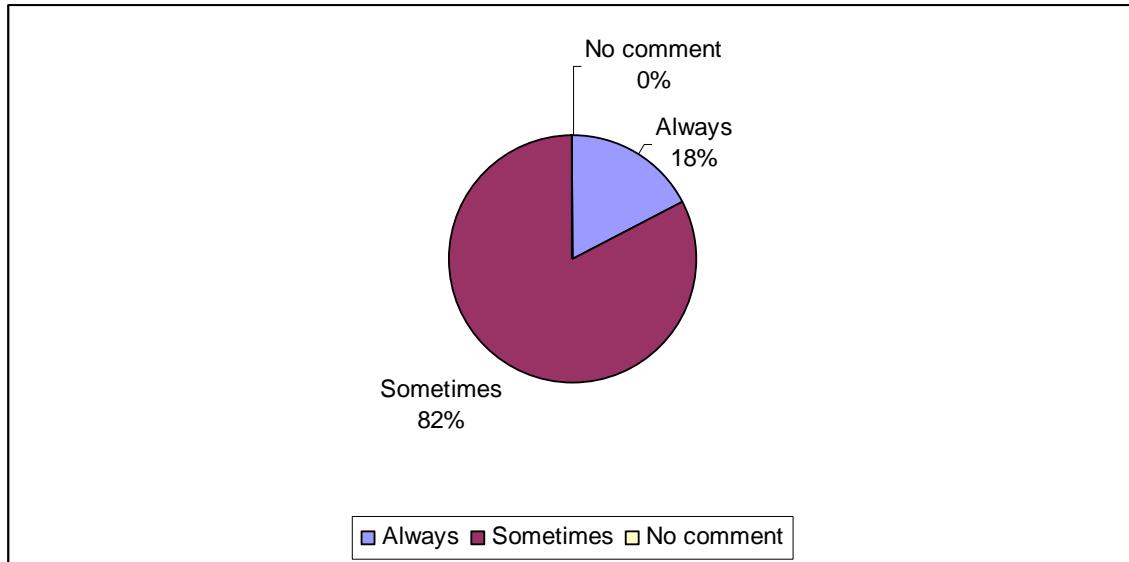
### Question 15

**Do you think that linguistic and communicative difficulties of the autistic kids can be overcome with the help of supportive friends, family and teachers?**

**Table 15**

Answer type	No. of teachers	Percentage (%)
Always	7	17.5%
Sometimes	33	82.5%
No Comment	0	0

This is the only question which does not have the multiple choice of 'yes', 'no' or 'no comment'. It has the options of 'always', 'sometimes' and 'no comment'. Only 17.5% teachers agreed on the point that with the help of supportive friends, family and teachers the linguistic and communicative difficulties can 'always' be overcome and 82.5% agreed that the difficulties can 'sometimes' be overcome with the support and encouragement. A pie chart is given below to show the percentage.



**Figure 3: Do you think that linguistic and communicative difficulties of the autistic kids can be overcome with the help of supportive friends, family and teachers?**

Though the supportive and encouraging environment has always been emphasized for the linguistic and communicative development of the autistic children, it is not always possible that the autistic children will overcome their linguistic and communicative impairments with the help of such environment. However, even if they cannot overcome all their difficulties, to some extent, it will help them. Teachers also agreed on the point that the teachers, families and friends should keep trying to encourage them.



## Chapter 5: Conclusion

### 5.1 Conclusion

There are different types of language and communication impairments that the autistic children experience in their everyday life. The environment can render more influence in enhancing children's linguistic skills than the children can do on their own to improve their language. However, because of the lack of social interaction and communication with other people, these autistic children cannot get the opportunity to learn and develop their language from the surroundings. It is because, they are very much reluctant to talk to people and love to live in their own world. On one hand, it does not necessarily mean that all the linguistic impairments will be present in every single autistic child. On the other hand, the communicative impairments or the lack of conversational conventions is present in almost every autistic kid. Moreover, the absence of the theory of mind is universal to all the autistic population and the lack of this theory is closely connected with the communication difficulties. Because of the absence of the theory of mind, these autistic children cannot perceive other's behavior, thoughts, beliefs and perspectives and cannot express theirs to other people. As a result, they cannot get themselves into a meaningful conversation. Again, difficulties in using words or structuring sentences hinder their communication capacity. Autistic children cannot express or understand mental states or cognitive terms and it is another reason for their communicative impairments because they fail to understand the mental states of the speaker and how to deal with them. From the very basic of the articulation to the tricky subject-verb agreement, everywhere the language problems of the autistic children varies in different degree. However, these language and communication problems can be solved, even if to some extent, with the help of proper guidance and training provided by friends, families and teachers. To overcome these impairments, it is

important to create such an environment where these autistic children will feel free to use their existing knowledge of language and communication.

## **5.2 Recommendation**

- Teachers should be trained enough and properly. It is because, teaching the special children is far more different than teaching other students. That is why, along with the teachers' training institute for regular schools and colleges, there should be also the training institutions for the teachers of the special children..
- The school authority should be friendlier to the researchers because if there will be more and more researches on this area, it will help to find out the loopholes and take necessary steps.
- Most of the schools are run by private organizations. As a result, the tuition fee is really high and in some cases, it is impossible for the middle class or low income group people to get their autistic children admitted in these schools. That is why, the government should also open some public and governmentally funded schools for the special children and certain amount of money should be allocated for them during the budget.
- The mass people should be made aware about the autism through the TV ads, seminars, campaign and so on. People in our country still have some wrong notions about the autism and the autistic children. They should consider and treat these children as the special kids but not as abnormal and different from the other kids.

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## Appendix

### Appendix 1: Questionnaire for the teachers

Questionnaire on 'A Study of the Communicative and Linguistic Impairments of the Autistic Children'. (Here, by autistic kids, it is being referred to the children those who have Classic Autism or Kenner's Autism but not Asperger Syndrome or High Functioning.

School's name:

1. Do the autistic children have below-average IQ and learning difficulties?	Yes	No	No Comment
2. Do the autistic children have the lack of interest in other people and prefer to be alone?	Yes	No	No Comment
3. Does every autistic child lack the 'Theory of Mind'? (It refers to the idea of understanding different mental states-such as belief, desire and knowledge-that enables us to explain and predict others' behavior)	Yes	No	No Comment
4. Do you think that the absence of the 'Theory of Mind' is responsible for the linguistic and communicative impairments of the autistic kids?	Yes	No	No Comment
5. Is language delay common among the autistic kids?	Yes	No	No Comment
6. Is 'language regression' (normal development is followed by the difficulties of skill acquisition and frequent loss of or failure to use existing language and social skills) common among the autistic kids?	Yes	No	No Comment
7. Do you think that echolalia is one of the most important features of the autistic children's language?	Yes	No	No Comment
8. Do the autistic children lack intonation in their speech and does it make their speech boring and monotonous?	Yes	No	No Comment



9. Do the autistic children have problem in expressing mental states terms or the terms for the cognitive states (e.g. know, think, pretend)?	Yes	No	No Comment
10. Do they have problems in understanding the non-literal sequences (e.g. metaphor, joke, irony, mockery)?	Yes	No	No Comment
11. Do they lack the conversational conventions (e.g. politeness, turn taking, levels of formality)?	Yes	No	No Comment
12. Is the 'Triad of Impairments - impairments in social interaction, impairments in verbal and non verbal communication and an inappropriately restrictive and repetitive behavior' common among the autistic kids?	Yes	No	No Comment
13. Have you ever found any kid who is hyperlexic (those who begin reading words before they get to school and are obsessive in their interests in letters, reading or writing)?	Yes	No	No Comment
14. Is it possible for the autistic kids to remain mute for the rest of the life?	Yes	No	No Comment
15. Do you think that linguistic and communicative difficulties of the autistic kids can be overcome with the help of supportive friends, family and teachers?	Always	Sometimes	No Comment

## **Appendix 2: Interview of the teachers**

1. What is the average age when children can be diagnosed with autism?
2. How does the 'Theory of Mind' affect the communicative development of the autistic kids?
3. How can the supportive and encouraging social and linguistic environment have an impact on the language and communication development of the autistic kids?
4. What types of articulation problems do the autistic children experience?
5. What types of difficulties do the autistic children have in word use and sentence structure?
6. What are the common grammatical errors found in the autistic children's language? (e.g. using tense, pronouns, subject-verb agreement)

### **Appendix 3: Interview of the Speech Therapists**

1. What types of articulation problems do the autistic children experience?
2. What types of difficulties do the autistic children have in word use and sentence structure?
3. What are the common grammatical errors found in the autistic children's language? (e.g. using tense, pronouns, subject-verb agreement)
4. What procedures do you follow with the autistic children to overcome their language and communication impairments?

**Appendix 4: Checklist of the Observation**

1. What types of language impairments can be found among the students?
2. What types of communication impairments can be found among the students?
3. What techniques/activities are used in the class to teach the students about language and communication?
4. What other skills are taught in the class?
5. What are the responses of the students in the class?