

## **Social Communication Difficulties and autism**

Dr Vogindroukas Ioannis

Psychiatric Hospital of Thessaloniki

Autism is a pervasive development disorder (DSM-IV, 1994, ICD-10 1992). The essential features of the Autistic Disorder have been described as :

- a) presence of a markedly abnormal or impaired development in social interaction and communication,
- b) and a markedly restricted repertoire of activity and interests (DSM-IV 1994, ICD-10 1992).

As autism involves an impairment of social communication (Wing, 1979, 1996) children across the autistic spectrum may not acquire language in the same way as normally developing children. As Newson (1979) suggests children with autism have difficulties not just in speech and language but in coding in any of the early communication modes, such as facial expression, gesture and other body language and impairment of social timing.

In the practice of the Child Psychiatry Centre of Thessaloniki parents usually seek professional help when their child does not develop speech by the third year of his/her life. Although they might already have noticed that their child is quite different from other children, it is only when speech fails to develop that they become really concerned.

However, there are also some cases that although the child has developed some oral skills, parents become concerned because their child does not use speech for communication appropriately.

Although parents focus on the failure of developing oral skills, usually the underlying impairment is much more than speech difficulties and involves all communication modes, impairment of social relationships and inflexibility in thinking processes (Newson, 1979). Sometimes in the presence of no other major physical abnormalities, but from the history of the child's early communication development and careful observation of his/her current patterns of interaction, the multidisciplinary team diagnoses that the child is developing across the autistic continuum.

Study of how children acquire speech and language, as well as how they develop their pragmatics skills provides us with a framework to diagnose and provide ways of intervention appropriate for children with autism. As Flack, Harris, Jordan, and Wimpory (1996) suggest, this does not mean exposing children with autism to the same experiences as normally developing children, as these children with autism develop across a different language and communication path from normally developing children. However, an understanding of the normally developing patterns of communication is essential for planning our intervention.

Before discussing the differences between normally developing children and children across the autistic spectrum, we will define the terms 'communication', 'language and speech'.

According to Owens (1990) communication is the process by which individuals exchange information and convey ideas. However, Halliday (1975) underlines the importance of the intention to communicate, which is the motivating force that makes people communicate and socialise.

The intention of communication can be related with the 'theory of mind' (Baron-Cohen, Tager-Flusberg, Cohen, 1995). Baron-Cohen et al (1995) suggest that the theory of mind describes the ability to attribute mental states to ones self and to other people, as a way of making sense and predicting behaviour.

Communication involves a sender of a message and a receiver. In order for communication to be successful the encoder of the message (sender) and the receiver must use a socially shared code (language). Communication can be achieved in different modes such as speech, writing, drawing, and manual signing (Bernstein, 1993).

This definition is a convenient and concise expression of ideas about communication which are generally held to be true.

Speech is the most common mode of communication and involves the precise co-ordination of the neuromuscular speech mechanism in order to produce sounds and linguistic units (Bernstein, 1993), which encodes meaning.

However, successful communication does not depend only on knowledge of language and ability to use, for example, speech correctly. What seems to be equally important is that the communication partners must be alert to the needs of their listeners and adapt their message to these needs. In addition both communicators must be alert:

- a) to the para-linguistic aspects of communication, which involves supra-segmental features such as the intonation, speech rate, stress, pauses and
- b) to the non-linguistic aspects such as body posture, facial expressions, gestures, and body proximity.

Bloom and Lahey (1987) define language as a code whereby ideas about the world are represented through a conventional system of arbitrary signals for communication. The major components of language have been described by Bloom and Lahey (1987) as Form, Content and Use. Form includes the linguistic elements that connect sounds and symbols with meaning and includes phonology, morphology and syntax. Content involves the meaning that is encoded by the form. Use involves the social knowledge that is required in order to use the appropriate form to encode meaning in different situations.

Language difficulties in children with autism are related to the communicative rather than the structural aspect of language (Schopler, Mesibov, 1985, Jordan 1996).

Various studies have estimated between 20% to 50% of individuals with autism will remain mute (Flack et.al 1996). Three quarters of children with autism who develop speech are echolalic. Echolalia as behaviour shows us the way children with autism learn languages. The children with autism who develop language learn it in a different way in comparison to normally developing children. The theory of Skinner (1957) who is cited in Kati (1992) for acquiring language can explain the learning of language by children with autism. Skinner suggests that children acquire language because they imitate adults. The same happens when children with autism learn language because they imitate their parents and other adults by copying their utterances but they are not able to use the language appropriate in different situations. Echolalia is evidence that

Skinner's theories may apply in the case of children with autism. It must be said, however, that subsequent research has shown that Skinner's theories do not apply to the language acquisition of normally developing children.

We can understand the difficulties in language of children with autism using Bloom and Lahey's model of language disorders.

Bloom and Lahey (1978) suggest «the children with language disorders may have a problem in formulating ideas about the world; they may have difficulty in learning a code for representing what they know about the world; they may be able to learn a code that does not match the conventional system used in the linguistic community; they may have learned something about the world and something about the conventional code, but are unable to use the code in speaking or understanding in a certain context or for certain purposes; or they may develop ideas, the conventional code, and the use of the code, but later than their peers, or with dysfunctions in the interactions among the components» (pg. 290).

The children with autism, depending on their cognitive level, can evolve, according to this model, these kinds of disorders in which the form and content of language are quite well developed but the use of them are not appropriate. In children with autism with additional learning difficulties there may be disorders as described by the other part of the model in which all three aspects of language are in a state of disorder as well as the interaction between them which is also not functioning correctly.

#### .DEVELOPMENT OF LANGUAGE IN AUTISM

As language is a socially shared code, autistic children having difficulties attributing mental states to others are likely to encounter difficulties when using language in a social context because they are not alert to the needs of their listeners and they are inflexible in changing their frame of mind to adapt their message to meet the listener's needs.

Difficulties attributing mental states to ones self and to others may result in difficulties with communication.

The children with autism may develop a good phonological system and develop syntactic and grammatical skills but we do not know enough about their semantic system (Frith 1992, 1994). The problem is the pragmatic aspect of language which is related to the use of these skills. Bates (1976) who is cited by Bloom & Lahey (1978) suggests that the semantic aspect of language emerges from the pragmatic aspect of language in the same way as the syntactic aspects of language appear to emerge from the semantic. This statement underlines the significance of pragmatics and how the disorder in this area influences the general development of language.

The difficulties in acquisition of language by individuals with autism appear in the following aspects of language :

*Non-verbal communication* which includes natural gesture; facial expression; eye contact; body language; stance; and proximity. Research in this field find that 80% of communication is realised through the elements of non verbal communication.

*Semantics* covers words and their meaning. Many children with autism are able to learn a large number of words but have difficulties in interpreting these words when they are in sentences. The children with autism are unable to understand how the words relate to the world around them. This difficulty arises from additional learning

difficulties rather than autism, but autism makes it more difficult (Flack et.al 1996). Also children with autism show a limited ability to generalise using the words which they know.

That means that they are unable to understand the symbolic role of language and they can label only some familiar objects using the word for the object but not the same word for an object in a different situation. Ricks and Wing (1975) suggest that autism involves a deficit in representational behaviour and high-level abstractions. Menyuk (1978) cited in Bernstein and Tiegerman (1993) suggests that the difficulties in the semantic aspect of language which appear in children with autism relate to the inability to establish meaningful and relevant perceptual- conceptual categories.

*Syntax* is the term which relates to word order and grammar. The problems in syntax in most cases of autism arise from additional learning difficulties. There are no specific difficulties which are the result of autistic disorders (Frith 1992, 1994). The difficulties which the children with autism have in the syntactic aspect of language are not grammatical deficits but are difficulties in semantic development. The children with autism have difficulties using or manipulating certain linguistic forms of language because they do not understand their semantic counterparts (Bernstein Tiegerman 1993).

*Phonology* relates to the ability of the child to discriminate among the sounds which there are in the world. There is no evidence for phonological problems in children with autism except if the child has additional motor or hearing difficulties. Regarding the articulation of sounds, if there are some problems these are in those sounds which appear last in the phonological system of normally developed children. This part of phonology which produces problems related to autism is prosody. Prosody includes intonation; pitch; speech rate; fluency; stress; and volume of speech. These are the supra-segmental elements of speech which add to the meaning of utterances and are difficult for children with autism to discriminate and use.

*Pragmatic difficulties* are the central impairments of language in autism. Pragmatic refers to the use of language according to the context of communication. Such knowledge requires an understanding of what the pragmatic aspect of language involves, that is, who says, what, when, to whom, how, and in which situation (Flack et al, 1996). Children with autism do not develop a range of communicative functions, do not develop gaze interaction skills, do not develop behaviour such as protodeclaratives or protoimperatives, do not develop attention and joint action schemes, do not develop an awareness of agent, action or object contingencies, do not develop turn-taking and do not develop gestures or imitation behaviour (Bernstein Tiegerman 1993).

Pragmatic difficulties influence the language of children with autism in the following areas : difficulties in spontaneous speech; difficulties in rules of conversation; difficulties in deictic words; literal understanding of sentences; and difficulties in understanding of narratives.

*Understanding of speech.* The most common problem in the understanding of speech is in those parts of speech which change with the context and with the speaker, such as pronouns and prepositions (Bartak cited in Wing 1976).

Also difficulties appear for children with autism to understand when they are asked to make a choice because they do not understand the meaning of a sentence.

A characteristic of autism is the difficulty in understanding questions which refer to the past and children with autism are unable to answer questions like these. This difficulty also affects the understanding of verb tenses. Wing (1976) suggests that children with autism are limited to the 'here and now'.

*Communicative acts and speech acts.* It is true that children with autism communicate but using their own ways. The observation and analysis of behaviour in social situations helps us to understand the communicative behaviour of individuals with autism. Children with autism produce whole phrases and sentences without understanding the individual linguistic elements, for this reason they have often been described as 'language chunkers'. This means that children with autism cannot manipulate the building blocks of language to combine and recombine linguistic structures creatively (Bernstein Tiegerman 1993). Individuals with autism who have developed oral speech use behaviour such as echolalia, idiosyncratic speech, neologism, metaphorical speech, and repetitive questioning, to express their needs or desires. The analysis of these functions within the context of communication helps in understanding how individuals with autism learn and use language. Echolalia is the use of utterances of the others and of an other context in a new context. Echolalia for some researchers is a stage of language development and indicates the ability to establish a relationship between some utterances and a communication context (Bernstein Tiegerman 1993).

#### WORKING WITH THE LANGUAGE OF CHILDREN WITH AUTISM

Halliday (1973) suggests that children know what language is because they know what language does. Before this it is necessary to understand their means of communication, to recognise their needs and to relate the satisfaction of their needs to their environment.

This connection happens in normally developed children from the first months of their lives. In this period the children express their feelings and needs through vocalisation and movements. In the end of this period ( 6 months) which Bates (1976)who is cited in Bloom Lahey (1978) describes as 'illocutionary' the children increase their vocalisation and movements because their environment begins to accept only certain actions and vocalisations as meaningful.

This behaviour leads children to understand the means of communication and what communication is about. The children, with the help of their environment, recognise people as an element which acts as a force in the environment and as the force which can satisfy their needs. They try to direct the behaviour of others using vocalisation and actions.

Ricks (1972,1975) cited in (Wing 1976) finds that the children with autism can express the four emotions (requesting, frustration, greeting and pleased surprise) as normally developed babies do, but they have a personal idiosyncratic way of doing this and do not use the same sounds as normally developed babies. The sounds of children with autism are monotonous and become understood just by their parents.

Perhaps this happens because the children with autism are not able to understand that their behaviour can direct the behaviour of others and they may not understand the means of interaction with others. Most able children with autism have this function but they use people only for things or actions that they desire or are of interest to them.

This is the first point of our intervention with children with autism and especially with children who have additional difficulties such as learning difficulties.

Teachers should plan ways with which will show children with autism that people are not objects in the environment but that they are the people who can interact with him/her and can satisfy his/her needs.

We should lead the children with autism from the instrumental function of communication (Halliday 1973) to the interpersonal function. The first point of this function is interaction. Depending on the child's level we should find ways to interact with him/her. For example for the very low level children the way can be the imitation of the child's behaviour or the use of music if the child has some non communicative oral production.

The other aspect of non verbal communication which fails in autism is eye contact. The children with autism avoid using eye contact because they do not understand its meaning. In the normally developed children eye contact appears in the first months after birth and through this the children develop turn taking which for some researchers is the beginning of conversation, Bateson (1975) cited in (Bloom Lahey 1978) calls eye contact proto-conversation between child and parents. Jaffe, Stern and Peery (1973) cited in Bloom Lahey (1978) report that the basic synchrony between mother and infant gazing is an analogue of the rhythms of adult dialogue.

Eye contact helps a child with autism to understand in whose direction they express their feelings or desires, otherwise the children with autism might produce communicative behaviour in an empty room in which there are not any people to satisfy his/her desires.

Turn taking helps interaction with others and can be realised through eye contact.

Teachers should know how certain are these functions and should include them in their teaching sessions. They can use different games such as «peek-a-boo» games to establish eye contact and also games with balls or other things which they can throw to the child and wait for the same behaviour from him or her to establish turn taking. An other way to establish eye contact is the stopping of a child's hand when the child tries to take a desired object which is at a short distance from him/her. Using such a reflex in this way we will establish eye contact with the child and by continuing this behaviour we can teach the child to look at us before taking something (Jordan 1995).

Body language and gesture impairment is one of the criteria used to identify that a child has autism (Flack et al 1996).

Many babies with autism show their needs only through crying and screaming and when the child is able to walk he or she then uses very concrete gestures such as pulling adults by the hand and placing it on the object that is wanted (Wing 1976) without looking at the adult and pushing it away when interaction and assistance are over.

A very common gesture in normally developed children is pointing. Pointing is a clear communicative behaviour which can be used by the children to indicate the object which they want. The second function of pointing is to comment. Children use pointing to seek adults attention and to show them something which is of interest to the child.

In many cases of children with autism these two functions are absent.

We should add this function to our teaching plan of communication and language when we work with children with autism.

Pointing to request and seek attention are two functions which lead children to acquire language by giving meaning to concrete behaviour. As Halliday(1975) suggests, around

the tenth month of a child's life there appear another two functions which prepare the child to acquire language. These two functions are the 'instrumental' function and 'regulatory' function.

The child uses the instrumental function to have the object which they desire and the regulatory function to direct the behaviour of others.

Children with autism may develop these functions but not in the same way as normally developed children. The children with autism use others to acquire the desired object but don't use pointing for this or they use others to acquire the desired object but without paying any attention to the person who does this. Also children with autism may not use pointing to seek attention because they do not find any meaning in this.

That means that pointing does not have any social or communicative meaning to children with autism.

It is significant to teach pointing as a social behaviour but not only this. We should include in this eye contact to give meaning to the people who act in the environment. In this way we help children with autism to understand the means of communication and to learn that we can request things only from certain people.

The teaching of pointing for requesting can be taught using a variety of teaching methods in situations where the child wants something (Flack et al 1996). More difficult is the teaching of pointing to seek attention. A way for this is to seek the attention of the child any time when we hear a noise or we see something explaining what this is that we have heard or shown. Using this way we give a model to the child which he or she can copy in the future.

We can go through pointing to real objects to teach children with autism to point at the photographs of objects. Using photographs helps the individuals with autism to create basic skills for representation. Also in this way we teach the children with autism to focus their gaze at the photographs which we can use later to teach new concepts or as alternative ways of communication for these children who are unable to develop speech or other means of expression.

One method is for the teacher to put objects of interest to the child in a cupboard, and to attach the photographs of these objects to the doors of the cupboard. He/she teaches the child to point at the photo of the object which the child desires always using eye contact.

Representation is the fundamental function for acquiring language. We should help the child with autism to develop this skill. The goal of this is to help the child to create a symbol for the concepts which there are around him/her. We can begin with the real object and match the real object with the photo of the same object. In the next stage we can match the photo with the drawing of the object and also the drawing of the object with the symbol of the object. We can use symbols from Rebus or from MAKATON.

At the same time we can play with the child using games which represent real objects with a goal to developing symbolic play and to help children to establish the relationship between language and the world around them.

The next stage of teaching language to children with autism is the generalisation of concepts. As we have seen above, the deficit in generalisation of concepts exists in autistic disorders and especially in the children who have additional difficulties such as learning disabilities.

If we use the symbols which are already known to children from the previous work with them, we can generalise the symbol using photos, real object, drawings of the concept e.t.c We can put the symbol of one or more concepts in the middle and give the child pictures or photos or real objects of the concept asking him/her to put them around the symbol which represents it.

Here we can also teach the child synonyms of the concept if these exist helping to increase his or her vocabulary and the same time improve his or her understanding of speech.

In these sessions we can use a supporting language system such as MAKATON to increase the understanding of concepts and to give an alternative way for communication if the child is not able to develop oral speech.

Classification of concepts in categories is a stage of acquisition of language which is useful in children with autism. Working on the classification of concepts we create the ability to learn in the future because the child will be able to fit in these categories knowledge which he or she will acquire later in his/her life.

We can use the symbols again such as labelling for any category and to ask the child to classify the pictures of the concepts by putting them in the special place of the category.

Labelling of the concepts using words and gestures or only words helps in the clarification of the concept.

As we have already seen children with autism learn phrases as ‘chunks’ without understanding the elements of these phrases. When we begin to combine words together we should give the opportunity to the children to understand the elements of the phrases or sentences. In our practice we have seen that using symbols which represent the words of the utterance is very helpful. When we show the child a picture which has more than one concept, for example a picture of a child who is eating, we can support our expression of this picture by showing to the child the symbols of ‘child’ and the symbol of ‘eat’. Putting the symbols in the right order helps the child to understand that this utterance consists of more than one element and also helps in the syntax of the sentence.

We can use the same symbols to express other pictures in which one of the elements of the sentence is the same and changes the other. In this way we can show the meaning of the agent or of the action. For example ‘Dud eats’, ‘Dud drives’, or ‘The boy eats’, ‘The Mum eats’, ‘The man eats’ e.t.c.

We can use different tools to assess the language abilities of children with autism which help us to make a plan to work on the children’s language. One of these tools and perhaps the most appropriate for children with autism is the Derbyshire Language Scheme. This tool gives us useful information about the level of language understanding and about the syntactic and semantic abilities of the child. Using this information we can know the aspects of language which are disabled and make the plan for our language intervention. Also the TEACCH programme gives the opportunity to professionals to understand the developmental level of the child and give ways for working with children with autism in all areas of development.

It is not enough to teach children with autism skills for linguistic structure if we do not place the children in a situation in which the children can use these skills. We should teach the children the use of the language because this is the main language problem in autism as we have seen above. A good practice for this is the spontaneous requesting of

things which are interesting to the child. Thus we can put a plate with food in a place in the classroom visible to the child and we wait for the spontaneous request of the child to give him/her a piece of the food. Also we can use the special times for lunch or breakfast which is a known routine for the children to elicit the appropriate language behaviour. We can give the child the food without giving him/her a spoon or fork or something else which is necessary for the child (in Greece this may be bread or a piece of cheese). The child in these situations uses speech or gestures to ask for that which he/she wants and therefore learns to use the appropriate language.

The most characteristic difficulties in the language of children with autism are the use of the pronouns 'I' and 'You», the use of 'Yes' and 'No' and the understanding of the word 'or'.

We can work on these difficulties in special sessions one to one with the goal to develop the understanding and the use of these words.

We can use games which ask the question 'who has the ball' for example with the goal to elicit the correct answer from the child.

Asking questions such as 'is this a ball ?' when we are holding a ball or another object leads the children to learn the use of 'yes' and 'no'.

When we hold two things and ask the child to choose one of them by using the word 'or' we give the ability to the child to understand the meaning of the word 'or' and also to understand the function of choosing to interpret his or her desires.

## CONCLUSION

Working with the language of children with autism is the most difficult but also the most attractive area of speech and language pathology. We should always bear in mind that the problem is communication and not language structure. For this reason the teaching of linguistic skills without their use in a communicative context is the wrong approach for autism. There are no programmes which can help us work with the language problems associated with autism because every child with autism is a different case. Only the knowledge of the normal development of the child and the knowledge of autism is of any practical use. Teachers and other professionals who work with autism must be well trained in this field. Only the understanding of autism and the good communicative links between the people who work with them can help children with autism.

Parents are our partners and should be informed of our communicative language programme. The goals of the programme must be continued both in home and school situations in order to achieve the desired results.

We should not forget that the child's perception of the world is different from ours and we should try to understand the child's world before we expect the child to master ours.

