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8 Play in Children with Communication Disorders

All mental processes during the childhood – perception, memory, attention, imagination, thinking, purposeful behaviour – develop through direct engagement with language.

Connected with consciousness in general, human language joins various relationships with all mental processes. Being a mediated system of signs, language reconstructs all mental processes of the person, reaching the level of volitional, conscious functioning. It is clear that language and thinking are closely connected with each other.

Clinical, medical, psychological, and pedagogical research, as well knowledge in the professional fields of language, show that children with communication disorders face specific challenges associated with mental processes: attention, perception, memory, thinking (Hughes, 2010).

Not only the development of cognition suffers from the presence of communication disorders, but, as it is immediately evident, the area of social development is affected by the restriction of possibilities to exchange comments, ideas, proposals with their peers that these children unavoidably experience. This fact has, in turn, consequences on the overall child development, and in particular, on the language development itself. Solutions should be found as soon as possible to substitute and/or to support the communication of these children, exactly to the purpose of avoiding secondary acquired limitations.

However, before characterising the play skills of these children, it is important to identify the term 'communication disorders'. Most of the existing studies identify children with communication disorders as a heterogeneous group characterised by a range of difficulties in speech and language.

Communication disorders due to language difficulties are often associated with other kinds of disabilities, such as intellectual and physical impairments or autism spectrum disorders;[1] or, they can be present as the only or prevalent neurological disorder, as in the case of dysphasia.

Language disorders are usually diagnosed by using tests of nonverbal intelligence (Guralnick et al., 2003; Catts et al., 2002; Kelly & Sally, 1999). Other diagnosis instruments aimed at evaluating the detailed characteristics of the impairment can be used to study single levels, including those of phonology, morphosyntax, semantics, pragmatics, and discourse (Leonard, 1998; Tager-Flusberg & Cooper, 1999; Tallal & Benasich, 2002).

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1 Further deepening is contained in the related chapters of this book.

8.1 Some Characteristics of Mental Processes in Children with Communication Disorders

Psychological research states that limitations in communication often result in difficulties in some intellectual activities, such as to analyse purposefully the conditions of an intellectual task, or to find its essential elements and to single out the right correlations among them; to make comparisons; to generalise; to make abstractions; and to implement control over intellectual activities. The main obstacle for these children is the difficulty to plan their activities (and play is among them) as a logical series of consecutive specific actions. At the same time, the performance of separate operations usually does not cause difficulties to them.

The most critical limitation in the intellectual activity of these children is the insufficient development of separate operations, while the whole plan of the activity is comprehended and carried out by the child (Usanova, 1995). Lurija (1998) noted that communication disorders result in cross-functional social and developmental limitations.

All types of limitations in language and speech development, according to various authors, decrease the volume of information that can be acquired by a child; furthermore, the accuracy of the acquired information decreases and the processing of language development slows down. In general, they have negative effects on a child's play.

Children with speech impairments due to visible damages to the effector apparatus – for example, in the case of lip and/or palate cleft malformations[2] – often meet difficulties in interacting with their peers and experience emotional stress.

Stuttering[3] in childhood is often related to the limitation of attention concentration; according to some authors, they often show impulsivity that leads them to try to reach a goal in a hurry, without the needed concentration. Also, in this case, their relationships with peers can be restricted due to a reluctance induced by their awareness of their verbal expression difficulties; they look shy and sometimes isolated, do not trust their own abilities, are reluctant to take a central role in play and prefer to observe or to adopt supporting roles.

Children with dysarthria[4] have severe difficulties or limitations in developing effective attention abilities (both sustaining and shifting) as their peers; they may find it difficult to understand language and may need additional explanation or prompts

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2 Cleft lip and palate malformations, also known as oro-facial cleft, is a group of congenital impairment, that includes cleft lip and/or cleft palate.
3 Stuttering is a speech disorder in which the flow of speech is disrupted by involuntary repetitions and prolongations of sounds, syllables, words, or phrases as well as involuntary silent pauses or blocks in which the person is unable to produce sounds.
4 Dysarthria is a motor-speech disorder resulting from neurological injury of the motor component of the motor-speech system.

when they are given verbal tasks or instructions. They also may show difficulties in switching from one task to another, as well as a little interest in the results of the performed activity.

According to Ippolitova and Mastyukova (1985), children with dysarthria might find logical thinking challenging. Sometimes, they are not used to make connections between subjects and phenomena of the world around – similarities and distinctions – on the basis of usual and expected cues; for example, the classification of subjects is carried out on the basis of the concrete situational environments of their communication, while they find it difficult to make generalisations.

Developmental dysphasia,[5] which is a total restriction in speech related to language disorders, can radically influence the child's social and psychological development; it interrupts and affects the most important means and ways of communication, thus causing a slow down of the cognitive development. Children with developmental dysphasia may experience a slow rate in the information reception and in the quality of language processing, which, in turn, also worsens the communication abilities: for example, they may find it difficult to analyse tasks, make comparisons, generalise, make abstractions. Attention stability and switching attention can be also difficult. All these problems might cause them face possible emotional and psychological challenges, such as irritability, emotional instability, lack of initiative, and so on. A constant support to their motivation can be useful for their involvement.

8.2 Play Activities of Children with Communication Disorders

Psychological research states that preschool children with speech and language disorders, in comparison with their non-impaired peers, linger long in the manipulation of objects expected in the stage of practice play; in addition, role-playing games are mastered by them much more slowly, with quite repetitive and elementary contents. If the child starts playing with his/her peers, he or she quickly 'slides off' the role assigned to him or her, thereby breaking the rules. This could be a reason for these children often are excluded from play with their peers or they are given only supporting roles in the play activities.

The negative factors influencing the play of children with communication impairments are related to the fact that their language is considered poor by their peers, or that their play companions do not correctly understand what they are saying, due to their imperfect pronunciation of language or the adoption of unusual morphosyntactic structures.

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5 Developmental dysphasia is a severe impairment of the language system that is considered a result of cortical speech zones defect appearing in the preverbal period.

All these limitations may cause difficulties mainly to the symbolic play, where the use of language is almost imperative, for pretending an object is something else and agreeing on this fact with other children, for building up – alone or in group – play situations, with roles, conversations, events, and so on, or even for using the language as the core itself of play, for example, in narrations, in language jokes.

A number of researchers have, in fact, investigated the relationships between language disorders and difficulties in symbolic play (Lewis et al., 2000; Lyytinen et al., 2001; McCune, 1995; Watt et al., 2006). Many authors, for instance, noted that children with communication disorders face difficulties in handling peer conflict (Hart et al., 2004; Horowitz et al., 2007); they are seldom capable of behaving in an assertive way, get frustrated easily, and are more dependent on adults for assistance than other children (McCabe & Marshall, 2006; Picone & McCabe, 2005). For all of the aforementioned reasons, they are less likely than the typically developing child to engage in cooperative make-believe play.

Preschool children with severe speech and language disorders often tend to play with toys silently, in a solitary way; only sometimes, they may accompany their own actions with sounds or emotional exclamations. While communicating with peers, they tend to replace words with deictic words or gestures, or sometimes with single words. The most frequent emotional aspect of the relationship of a child with a toy is displayed in the form of exclamations, sounds, single words, onomatopoeias.

In the case that these children show also difficulties in understanding the language and the situations in which they are, the core essence of the play and mainly the game rules remain inaccessible for a long time; they tend to repeat their actions and to imitate what has been already done in other similar situations.

Another type of play that is really compromised in the case of communication disorders is the game with rules: in fact, in this case, not only the rules should be deeply understood – and they are mainly shared verbally in the children's group – but they should then be adopted, sometimes with the need of negotiating with the peers their right application.

All the play situations, within any type of play, in which a space is necessarily devoted to negotiation, mediation, to presenting and explaining one's own reasons and ideas about the play development, can be challenging for these children. They can, of course, take part in games and in collective play activities, but they rely mostly on imitation and repetition, while as soon as the need for a dialogue is foreseen, they would need support; otherwise, they will soon abandon the play activity itself.

8.3 Environmental Factors: Augmentative Alternative Communication

A number of researches noted that the differences in the play activities between children with communication disorders and the other children can be strongly related

to environmental factors and that the impairments can be widely reduced with the right environmental supports, strategies, and tools.

The quality and quantity of interactions with peers, the adult's ability to respond to the child's communication efforts, the accessibility of play areas for those facing additional impairments (e.g., children with motor and/or visual impairments), and the availability of adapted toys or assistive technologies for play and communication are the factors that influence the child's participation in play and leisure activities.

Due to its focus on participation, the adoption of Augmentative and Alternative Communication (AAC) strategies is a variable influencing the child's engagement in play and his or her participation in social interactions with peers.

According to ISAAC, AAC is "a set of tools and strategies that an individual uses to solve everyday communicative challenges".[6] AAC is an umbrella term that encompasses the communication methods used to supplement or replace speech for persons who experience impairments in the production or comprehension of spoken or written language.

AAC is based on devoted intervention approaches (Glennen, 2000) that combine the child's natural communication abilities (including any existing speech or vocalisations, gestures, manual signs, facial expressions) with aided forms of communication, including the use of communication boards with symbols[7] (pictures, photographs, line drawings, symbols, printed words) or the use of speech-output communication devices.

AAC is a multimodal approach, permitting a child to use a wide range of modes to communicate messages and ideas. As communication abilities may change over time, although sometimes very slowly, the choice of the AAC system or code at one age is not to be considered definitive, and it may be modified as a child grows and develops (Beukelman & Mirenda, 2005).

The roles an AAC system plays will vary depending on an individual child's needs; they can augment the existing natural speech, provide a primary output mode for communication, provide an input and an output mode for language and communication, and serve as a language intervention strategy (Light & Drager, 2007).

If a child needs an AAC communication system, it is very important that it is used during all his or her daily activities, to express his or her desires and ideas, to comment about what happens. Of course, in these cases, the AAC system as well as its low- or high-tech supports should be available in his or her contexts of life above all to support the daily activities, first of all for playing. The most common and well-known

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6 ISAAC is the International Society for Augmentative and Alternative Communication; www.isaac-online.org.

7 The symbols and pictograms that are used can be created on purpose, on the basis of the single child's needs, or belong to internationally established codes, as in the case of PIC, PCS, Blissymbolics, and so on.

role of the devices is to provide an output mode for communication. Technological devices, in particular, offer children with communication impairments the access to "the magic and the power of communication" (Light & Drager, 2007). It is also of utmost importance, in fact, that the child is offered appropriate AAC systems as early as possible, so that the communication mode becomes a substantial aspect of his or her life. Thanks to the use of AAC, the child can grow, learn, develop under the social and cognitive respect.

But, to reach these objectives, the related technological devices should respond to some particular characteristics (Light & Drager, 2002): among the others, they should be 'appealing, capturing'; they must be easily integrated into all aspects of daily living; they might 'provide access to the magical power of communication'; they should grow with children as they develop. The design of these tools is, thus, extremely important (Light et al., 2004), possibly as similar as possible in its main features to the children's first toys, above all as they should be used in collective spaces, where other children also live and play; they must be attractive also to the peers of children with communication impairments, and become a usual and well-known mean for communication and for playing together.

As it has been argued, the type of play that is mostly influenced by a communication impairment is the symbolic play. By providing the impaired child the right symbols he or she needs to fully participate, AAC can prove very useful to support – without underestimating the evidence from practice that in some cases play should be explicitly taught (Barton & Wolery, 2008) – all the symbolic play activities, from the pretend play to the use of dolls and other toys able to create environments and make-believe situations, or even role-playing.

AAC can, of course, also be adopted to tell stories, by substituting the written text that usually accompanies the children's book stories with symbols, and this option gives a group of children the possibility to share the same activity; if they are very young, symbols can be as the unique text, without the alphabetical one.

Furthermore, the possibility to manage a communication code gives the child with communication impairments the opportunity to play different roles within the group and also within the family: for example, he or she can tell a joke, pretend that an object is a different one, give instructions to other persons – peers or adults – on how they should act, or respond, and on the roles they should assume; if the device has also a voice output, the child might also take part in nursery rhymes, can even sing with the others.

If the communication impairment is not accompanied by other types of impairments, the child should not experience difficulties in constructive play; thanks to the AAC, he or she can be anyway supported in following the different steps of a complex activity, such as building a home for puppets, using Lego bricks, cooking biscuits, and so on, and this is much more true if a physical impairment is associated and the child has severe limitations in fine movements.

As to the games with rules, AAC can be used as a support to explain the rules to the child with communication impairments, in case this is needed, but it can also be concretely used as a tool for mediating relationship with peers – for example, to indicate the alternate turn, to score points, to interrupt the game if needed and makes one's arguments heard.

This short review can illustrate clearly that AAC is a very powerful tool for making it possible and improving the play of children with communication impairments; as it is easy to understand, communication being the most important way to be in contact with the world around, these play activities should be patently supported to enhance and empower their potential inclusive aspects. As soon as communication is available, it is also possible to build up new worlds – real or invented – and to modify them, to share ideas and projects, to discuss, to impose one's own points of view, to claim victory, or to admit defeat.

This not only favours but implies that inclusive contexts are offered to these children, so that they can fully benefit of the related opportunities for communicating, and for playing; on the other hand, the greater validity of the inclusive model has been confirmed in the field research (Foreman, Arthur-Kelly & Pascoe, 2004): students using AAC in general classrooms were involved in significantly higher levels and more frequent communicative interaction than their peers in special classrooms.

8.4 Conclusion

The topic of play of children with communicational disorders has not been studied in-depth until now and even the existing studies give only some suggestions about the reasons that are at the basis of the differences existing in their play activities. Too often, it has been assumed that children with communication disorders have inherent limitations in play when, sometimes, differences in play skills might be explained more easily by environmental variables.

However, it is important to take into consideration the possible reasons of play differences, cited by a certain number of the aforementioned researches.

–   The cognitive activities of children with communication disorders are impacted by difficulties in their attention, in particular, the attention focus, the ability to switch, the attention stability, and so on.
–   There are difficulties in memory – acoustic, visual, verbal, and logical. These limitations have an impact on the other mental processes, such as perception, thinking, self-organisation of purposeful activity, and they make speech even more difficult.
–   Speech and language disorders limit the social contacts and communication of these children with their peers and/or with adults. This influences in a negative way the development of the cognitive processes, and in turn, changes also the nature of their play.

It is very important for adults to understand the verbal and nonverbal signals while playing with the child. The aforementioned strategies and assistive technologies can play a significant role of support to parents and educators.

References

Barton, E. E., & Wolery, M. (2008). Teaching Pretend Play to Children With Disabilities. A Review of the Literature. *Topics in Early Childhood Special Education*, 28(2), 109-125.

Beukelman, D., & Mirenda, P. (2005). *Augmentative and alternative communication: Management of severe communication impairments (4th ed.)*. Baltimore, MD: Paul H. Brookes Publishing.

Catts, H. W., Fey, M. E., Tomblin, J. B., & Zhang, X. (2002). A longitudinal investigation of reading outcomes in children with language impairments. *Journal of Speech, Language, and Hearing Research,* 45, 1142–1157.

Foreman, P., Arthur-Kelly, M., & Pascoe, S. (2004). Evaluating the Educational Experiences of Students with Profound and Multiple Disabilities in Inclusive and Segregated Classroom Settings: An Australian Perspective. *Research and Practice for Persons with Severe Disabilities*, 29(3), 183-193.

Glennen, S. (2000, January). AAC assessment myths and realities. Paper presented at the *ASHA SID 12 Leadership Conference on Augmentative and Alternative Communication*, Sea Island, GA.

Guralnick, M. J., Hammond, M. A., & Connor, R. T. (2003). Subtypes of nonsocial play: Comparisons between young children with and without developmental delays. *American Journal on Mental Retardation,* 108, 347–362.

Hart, K., Fujiki, M., Brinton, B., & Hart, C.H. (2004). The relationship between social behavior and severity of language impairment. *Journal of Speech, Language, and Hearing Research*, 47, 647–662.

Horowitz, L., Westlund, K., & Ljungberg, T. (2007). Aggression and withdrawal related behavior within conflict management progression in preschool boys with language impairment. *Child Psychiatry and Human Development*, 38(3), 237-253.

Hughes, F. (2010). *Children, play, and development (4th edn)*. London, UK: Sage.

Kelly, D. P., & Sally, J. I. (1999). Disorders of speech and language. In M. D. Levine, W. B. Carey, & A. C. Crocker (Eds.), *Developmental–behavioral pediatrics (3rd edn)*, (pp. 621-631). Philadelphia: Saunders.

Leonard, L. B. (1998). *Children with specific language impairment*. Cambridge, MA: MIT Press.

Lewis, V., Boucher, J., Lupton, L., & Watson, S. (2000). Relationships between symbolic play, functional play, verbal and non-verbal ability in young children. *International Journal of Language and Communication Disorders,* 35, 117-127.

Light, J. C., & Drager, K. (2007). AAC technologies for young children with complex communication needs: State of the science and future directions. *Augmentative and Alternative Communication*, 23(1), 204-216.

Light, J. C., & Drager, K (2002). Improving the Design of Augmentative and Alternative Technologies for Young Children. *Journal of Assistive Technology*, 14(1), 17-32.

Light, J. C., Drager, K, & Nemser, G. J. (2004). Enhancing the Appeal of AAC Technologies for Young Children: Lessons from the Toy Manufacturers. *Journal of Assistive Technology*, 20(3), 137-149.

Lurija, A. R. (1998). Язык и сознание [Language and conscious]. Rostov-na-Donu, RUS: Fenix.

Lyytinen, P., Poikkeus, A. M., Laakso, M. L., Eklund, K., & Lyytinen, H. (2001). Language development and symbolic play in children with and without familial risk of dyslexia. *Journal of Speech, Language and Hearing Research*, 44, 873-885.

Mastyukova E. M., & Ippolitova, M. V. (1985). Нарушение речи у детей с церебральным параличом [Speech disorders in children with cerebral palsy]. Moscow, RUS: Education.

McCabe, P. C., & Marshall, D. J. (2006). Measuring the social competence of preschool children with specific language impairment: Correspondence among ratings and behavior observation. *Topics in Early Childhood Special Education*, 26(4), 234-246.

McCune, L. (1995). A normative study of representational play at the transition to language. *Developmental Psychology,* 31(2), 198-206.

Picone, M., & McCabe, P. C. (2005). The reliability and discriminant validity of the Social Interactive Coding System with language impaired preschoolers. *Journal of Early Childhood and Infant Psychology*, 1, 113-128.

Tager-Flusberg, H., & Cooper, J. (1999). Present and future possibilities for defining a phenotype for specific language impairment. *Journal of Speech, Language, and Hearing Research*, 42, 1275–1278.

Tallal, P., & Benasich, A. A. (2002). Developmental language learning impairments. *Development and Psychopathology*, 14, 559–579.

Usanova, O. N. (1995). Дети с проблемами психического развития Издательство [Children with problems of psychological development]. Moscow, RUS: NPC Korrektsiya.

Watt, N., Wetherby, A., & Shumway, S. (2006). Prelinguistic predictors of language outcome at three years of age. *Journal of Speech, Language, and Hearing Research*, 49, 1224-1237.