Alternative and Augmentative Communication in Support of Persons with Language Development Retardation

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Abstract: Frequently, a child with severe deficiencies is at an early stage of communication development, which symbolizes a disadvantage in comparison to his chronological age. Although the child may display a certain repertoire of incipient communication behavior due to his motor, sensory, cognitive, or another type of deficiency, it is possible that adults may not be able or may not know to respond to these types of behavior. Furthermore, when adults try to answer, it can happen that the child can not understand their signals. As a result, the child is not able to acquire the necessary understanding in order to make the cognitive progress from unintentional communication to an intended one. In these circumstances, the most important thing is that the family or the caretakers should benefit of expert counseling, in order to learn how to become aware and respond to any child communication attempts. Therefore, a child whose speech does not develop normally or who will not be able to efficiently communicate by way of speech due to a pre-existing affection, should benefit at short notice from the Augmentative and Alternative Communication (AAC). In the individual therapy sessions, where the parent will participate, the augmentative and alternative communication specialist will implement the individual intervention program in order to develop the child's language functions and the transition to the intentional, symbolic communication in order to achieve a recovery or a compensation of the language function. In Augmentative and Alternative Communication interventions, subjects will be encouraged to use various methods and means in different situations and with different communication partners. The Augmentative and Alternative Communication system represents the opportunity for people with a delay in language development to acquire a certain level of independence, contributing to greater social participation by these people.

Keywords: *Communication deficiencies; communication development; language development delay.*

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1. Introduction

Certain people with deficiencies can not use speech as the primary means of communication and need to resort to specific techniques and means. The idea of augmented communication is to use all the abilities the deficient person disposes of, in order to compensate for the impairment of the verbal communication capacity. By way of ever-evolving technology, new opportunities are emerging for people with deficiencies, in order for them to achieve a better level of functional communication. At international level, in the last five decades, but more significantly since 1980, specialists from several fields of activity, such as: special education (especially teachers dealing with the education of severe deficiencies and autism students), speech disorder therapy, occupational therapy, electronical and biomedical engineering have made considerable efforts to find and develop methods and systems of non-verbal communication.

Non-verbal communication methods may be defined as "procedures of encoding and messages conveying without having them being directly coded into phonemes through the vocal tract" (Beukelman & Mirenda, 1992). Thereby, any encoding and messages conveying that does not occur through the direct production of sounds by the respective person, can be classified as a non-verbal communication method.

We all use augmentative communication and we daily see people around us using this communication approach. It is the manner of communicating without speaking. Day by day we use gestures, facial expressions, body standings, shopping lists, notes which help us convey certain messages. The augmentative and alternative communication terms encompasses a wide range of adapted communication methods.

Augmentative and alternative communication (AAC) concern all the methods and means of communication intended for helping/replacing the speaking (and/or writing) when these are being affected. Augmentative communication designates approaches of communication which can be used along with the affected speech, in order to improve the conveying and the understanding of the message, thus the communication. Alternative communication concern the methods and means of communication used for the total replacement of the speech and/or writing, when it can not occur.

In accordance with ASHA's standing in the annual publication of the association (ASHA, 1991), the ACC interference is multimodal, so it calls

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for the entire ability of one individual to communicate, including any speech or vocalization delay, gestures, signs or support means of communication.

An augmented and alternative communication system represents: "an integrated set of components, including symbols, communication ancillaries, strategies and techniques used by one individual to support the communication" (ASHA, 1991), this definition emphasizing the use of multiple ways and methods in communication.

Augmented and alternative communication subsumes any device, any system, any method which may improve the ability to communicate of a person with a communication deficiency. Although AAC is regularly used with reference to formal communication devices and communication systems as manual signs system, communication boards and speech production devices (VOCA), it also includes less sophisticated communication methods, such as vocalizations, facial expressions, idiosyncratic gestures etc.

The augmentative and alternative communication is required particularly when a child does not acquire speech normally and a significant delay appears in its development: but this is not a simply substitute for the manner in which the child is currently communicating. It is necessary in order to help the communication, only replacing the elements which are unintelligible, socially unacceptable, or dangerous to the subject or those around it. Ideally, the augmentative and alternative communication includes more than just one system of communicating, the child using the most appropriate manner according to the persons with whom he communicates, to the circumstance and to the given activity. Very often, one of the methods of communicating from the AAC program is the speech. Thus, within the AAC interference, the subjects will feel encouraged to use various methods and appropriate means in different situations and with different communication partners. This strategy follows the principles of total communication and it means that AAC users shall use multiple manners of communicating in order to make the most effective communication possible.

Augmentative and alternative communication is a way of intervention which uses manual signs, symbol communication boards and synthesized voice-emitting devices, also incorporating all the child's overdue communication skills. These overdue skills can refer to any rest of speech or vocal ability, gestures, manual signs, the ability to use communication boards, and electronic voice-emitting devices.

Some children hold no conventional means of communicating and sometimes express their needs and desires in a socially unacceptable manner,

for example: being aggressive, being destructive, being self-stimulating or persevering actions. Augmentative and alternative communication can replace these inconceivable forms by conventional means of communication. Therewith, alternative and augmentative communication contributes to the up surging access to learning: thus, to the cognitive development of the individual.

To what extent, does an immobilized in a wheelchair person with neuro-motor deficit achieve a certain degree of independence? Perhaps (s)he will never be able to move independently, (s)he will not be able to feed or dress unaided, but having access to an AAC system will definitely be able to communicate with others. The AAC system would be its opportunity to acquire a certain degree of independence: providing a higher degree of autonomy and independence, AAC contributes to greater social participation of people with language and communication disabilities.

2. Who can benefit from augmentative and alternative communication?

From the perspective of AAC users, they can be divided into three groups (Chinner, Hazell, Skinner, Thomas, & Williams, 2001):

- The group of people requiring alternative language - who very well understand, have good receptive language and good internal language, but lack the sensory-motor ability to articulate a good pronunciation of words in order to make intelligible speech possible. Is to them whom we need to provide with the right means of communication (the communication book, the electronic device, the gesture language, etc.) and help them adequately use the access techniques of the device (the group of people with relatively well-preserved cognitive abilities, but with neuromotor impairment: cerebral palsy, strokes, blunt head traumas, multiple sclerosis etc.).

- A group of people requiring augmented language: both receptive and expressive, who do not understand the language well, and can not express themselves perceivably, coherent, functionally through speech. For them, the surrounding world needs to be reorganized via labeling by means of symbols which they can understand and hoping for them to later integrate those symbols into achieving an effective communication (the group of people with autism, severe mental deficiencies, dyslexia-dysgraphia).

- The group of people requiring AAC for a certain period of time in their lives: either children who encounter a delay in the appearance and development of language, and after learning and using an AAC system, the speech also enhances, either adults who lost their ability to speak following a

disease, such as strokes, multiple sclerosis, senile dementia etc. and need to use an AAC system, either people who, due to surgical interventions, can not use speech for a certain amount of time and use AAC in a transient way.

There is no deficiency/disability which requires the use of an augmentative and alternative communication system. AAC is a system of strategies that can be used to facilitate the communication of people of different ages and with various diseases such as: cerebral palsy, mental deficiencies, language and communication deficiencies, stroke, blunt head traumas, multiple sclerosis, neuro-motor impairments, multiple and deep learning difficulties, autism etc.

It can be said that a person needs more of the AAC system, as its speech is more affected. Some people will need AAC as the main means of expression throughout their lives, due to their physical disability or congenital language. Other people will use AAC at a later stage of life due to deficiencies accrued by accidents or various diseases. For others, AAC will only represent a transient stage, up to the evolution of their speaking ability. And some can adequately speak and only use AAC for writing. A particular category is represented by the hearing-impaired and deafness people, who use the gesture language as their first major communication system, which often replaces speech altogether. Whereas in the case of the other categories of deficiencies, alternative ways of communication supplement the delays and the attempts to speak, this is why it is said that those people use AAC. Likewise, blind or visually impaired people using Braille or Moon and the technology based on these systems are considered AAC users, even though the learning of these systems is not the responsibility of AAC specialists, but special education professors, specialised in visual impairments.

3. The classification of augmentative and alternative communication systems

There are several types of augmentative and alternative communication system classifications in the international specialized literature. One of the most comprehensive classifications, which takes into account both the technique and devices criteria used, as well as the used types of symbols and their combination according to the AAC user's possibilities is "Supporting communication through AAC (SCOPE, <http://www.scope.org.uk>)."

Thereby, non-verbal communication systems are classified into 3 large groups:

- Gesture systems

- Assisted gesture systems
- Neuro-assisted systems

A simpler and more commonly used classification in the specialised literature nowadays, divides augmentative and alternative communication systems into two large groups (Miles, 2000):

- Unaided AAC systems
- Aided AAC systems

Unaided AAC systems are those which do not require the use of any additional equipment or additional materials. This category includes gestures and manual gesture systems.

Aided AAC systems are communication systems which require the use of specific objects or equipment, such as symbol boards, communication books, computers or VOCA (electronical speech production devices). It may mean something very simple, like the alphabet letters written on a sheet or a very complicated electronical system programmed with a very rich vocabulary. Aided AAC systems have in its turn advantages and disadvantages:

Advantages:

- The abundance and flexibility of the available vocabulary;
- Sophisticated storage and vocabulary rendering methods;
- Provides users with specific access components, some of which are designed to require only minimal movement, for example, pushing a switch - hence being accessible to people with severe physical deficiencies;
- The possibility of increasing the speed of communication;
- The speech production devices increase the user's independence and also the access to various forms of interaction, such as group discussions, telephone conversations, computer connection, and the use of social networking sites that go beyond face-to-face communication.

Disadvantages:

- Given the fact that it is an equipment, it may be expensive, difficult to transport, lost, damaged, it can require batteries or an electrical charge system;
- It may be necessary for the wheelchair or the class bench to be equipped with a support device for AAC equipment;
- Because it can happen anytime that the equipment shall fail, remain without batteries, etc. it is necessary for the person in cause to always have an unaided AAC system as well;
- It can raise unrealistic expectations on "instant success" due to technology involvement.

Whenever there is a delay or a deficiency in the language development, AAC should be considered on the grounds that:

To a large extent, the cognitive, social and child's skills depend on the ability to communicate. AAC has proven to support the development of child's abilities in each of these areas. Often, a child with severe deficiencies is incapable of acquiring natural cognitive and social skills which are based on conventional communication. The inclusion in an educational-therapeutic program based on AAC, will empower them with a functional way of communication and at the same time it will also impel the child in the mentioned related areas.

Parents are generally incapable of interpreting the incipient communicating attempts of the child with deficiencies. This leads to a distortion of the normal relationship between the child and his caregivers, as well as the extinction of the child's further attempts to communicate. An AAC program, helps parents become more receptive to the child's communication behaviors, in addition to providing the child with more easily decipherable ways of communicating.

A child with a communication deficiency is susceptible to what is called "learned helplessness" (Milles B. 2000). Because adults no longer expect to be informed by their child, about its needs and requirements, they anticipate and often, misinterpret their child's needs. Therefore, since the child's needs are being satisfied beforehand its request, the child can cease any attempt in showing what his/her needs are, becoming extremely passive. AAC provides the child the means by which (s)he can make choices and indicate what (s)he likes and what (s)he does not like. In fact, giving the child more control over the environment is often one of the first goals of the communication program.

A child who becomes frustrated by its inability of communicating, of being misunderstood by others, can resort to behavioral disorders, in order to achieve what (s)he wants. AAC offers the child socially accepted ways of communicating his needs and desires. All children sometimes experience unwanted behaviors. However, when these unwanted behaviors become so intense or frequent that it affects the safety of the child or its ability to learn, it is necessary to intervene on them. Behavioral problems can include: anger crises, throwing objects, hitting, scratching, biting others or itself. Self-stimulation (waving the fingers or throwing the eyes over the head) is also a behavioral problem. In the past, a variety of techniques have been used in order to try to control these inappropriate behaviors. One of the most recent and successful methods, is called: "Functional Behavior Assessment (FBA)" or "Positive Behavior Support". (Reichle, York and Sigafos, 1991).

4. Conclusions

To prevent all these unwanted side effects of communication deficiency, early intervention is recommended through augmentative and alternative communication. Early intervention services are usually provided by a multidisciplinary specialists team which includes physicians, special education professors, social workers, a specialist in language therapy and augmentative and alternative communication. They include various activities which can be carried out in hospitals, in special offices, in special schools or at home. The augmentative and alternative communication specialist will provide advice to the family on how to interpret and develop the child's communication methods, how to organize the communicational environment within their home, and learning situations through games and the use of augmentative and alternative language. Moreover, in the individual therapy sessions, where the parent will also be present, the augmentative and alternative communication specialist will implement the individual intervention program, aiming at the development of the child's language functions, and the shift towards intentional, symbolic communication, so as to achieve a recovery/compensation of the language function.

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