Interaction – Based Intervention Programs in Multiple Disabilities

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Abstract

Competences of practitioners working with children with multiple disabilities refer mainly to assessment, curriculum planning and intervention, but these are specifically related to the learning process and the needs of the child in development. Since the child- centered approach is a key factor in the success of intervention, more and more theoreticians and practitioners take into consideration the interaction approach so that the teachers become more reflective on their own behavior, language and prompts and also what they determine in a child's behavior, motivation and communication. The present paper focuses on the modalities in which practitioners become aware of the consequences of their own abilities in intervention and they implement the most adequate strategy and method for that specific context, time and child's needs. The intervention should be dynamic, managed by both partners involved, observing each other's participation, paying attention to emotional state and well- being.

Keywords: multiple disabilities, interaction, responsive environment, milieu approaches, communication

Introduction

Multiple disabilities do not represent a sum of the disabilities, but extend beyond each disability. Individuals with multiple disabilities can present sensory deficit, motor disorders, syndromes, autism, associated with developmental delays, challenging behaviours, learning difficulties. Multiple disabilities represent a situation and not a condition, this situation being characterised by the fact that the person cannot obtain enough information from the environment to sustain the learning and communication processes, processing insufficiently the environment that assures independent functioning (McInnes, Treffry, 1982). In multiple disabilities we take into consideration that the evaluation and intervention must be carried out individually as each person is considered unique according to the developmental profile. There are a series of common characteristics that refer to the difficulties in the development of communication skills, delays in the motor development and mobility, difficulties in sensory integration, limited access to the environment because of a reduced feed-back due to reduced interactions, difficulties in monitoring own actions and generalisation of situations, limited social interactions, difficulties in developing initiative and development of self help skills.

How can we determine in the process of intervention a better quality of interaction, improved participation and development of concepts and communication abilities? If the child participates actively in the interaction, then learning takes place and the child's self- esteem about self- learning is improved. Many studies focus on determining how the interaction can be improved, but there are not many studies that focus on the child's perspective on his own skills within the interaction and the whole process as well. How can we determine that he is aware of his own behaviors within the interaction and mainly if he is aware of his own skills that can make a difference in order to modify the dynamics of the process with a targeted and desired outcome? The child should not just respond to our initiatives, prompts, routines and behaviors, he must learn how to master his own behaviors and skills in order to initiate, maintain interaction and learn as well. The focus of his/her attention should not be just on the interaction, with continuous trials to maintain it, but to move beyond and focus on the learning that takes place.

2. Early Communication and Interactions

Early communication with children with multiple disabilities includes mutual attention, shared topic, common language, comfortable pace, turn-taking and balance of turns, comfortable positioning and mutual caring (Letchie, Riggio, 2002). Communication in the context of multiple disabilities is a synergistic process, that is determined by a multitude of factors (intra- and inter-personal), but also by external influences (Arthur-Kelly, Foreman, Bennet, Pascoe, 2008). The development of communication involves interaction. The study of interaction between children with disabilities and their caregivers/ teachers has been approached by authors like Ephraim (1986), Nind and Hewett (1994), Nafstad and Rødbroe (1999). Ephraim initially used the term "Augmented Mothering" to represent a technique that involves the use of body language through imitation to build up conversations that become meaningful for the co-partner (Caldwell, 2006). Nafstad and Rødbroe (1999) propose the concept of co-creative communication that involves sharing, reciprocity, dialogicality, negotiation, social interaction, proximity. Within the interaction, the child needs to be an active participant who is involved and directs his own development (Caldwell, 2006). Studies have shown that language is better formed and developed within interactions with the adults in the activities, in a secure environment, with support from the adult (Pease, Ridler, Bolt, Flint, Hannah (1988). Pogrund and Fazzi (2010) show that the environment must include routines that will allow the children to anticipate events and take decisions. Interactions in natural contexts develop concepts and language abilities that will allow children with multiple disabilities to act upon the environment.

Janssen, M.J., Riksen-Walraven J.M, Van Dijk, J. (2003) maintain the importance of harmonious interactions and their significance, in relation mainly to communication. They refer also to the sensitivity of the caregiver and the emotional support that the child is aware that he can get. The caregiver must be aware of the child's signals and behaviours and forms of communication, interpret them accurately and give a response so that the child feels that he is understood. Studies of intensive interaction have shown that this approach determined an increase in the children's attention to their interaction and communication partner, an increase of positive affect, proximity and attention to the wider environment (Zeedyk, Caldwell, Davies, 2009). Bricker and Veltman (1998) present the differences between child –initiated versus teacher – initiated activity concerning selection of the activities, the general sequence of instruction and schedule, but most of the programs combine the two approaches.

Early interactions include the following concepts: the child's temperament, the responsiveness of the caregiver, attachment and autonomy (Fazzi, 2002). The child's temperament refers to the level of activity, routines and schedules, length of attention span and persistence in completing the tasks, adaptation to changes and degree of fussiness (Fazzi, 2002). Fazzi citing Klein, Chen and Haney support the idea that responsive interaction with primary caregivers is the most significant factor in a child's development, stating that responsiveness includes the ability to interpret the child's cues and provide what he needs consistently and immediately.

Stremel and Schutz (1995) state that the general structure of intervention within interactions is based on strategies of control of activities and complexity of answers and behaviours, techniques of facilitating communication and understanding of natural consequences. Intervention is realised one to one, behaviours that are significant, language that is functional and spontaneously used and interpreted by both partners. Some children become dependent on the prompts that are used and are waiting for the support and cues offered by the intervener, even if they master the skills that would allow them to do the task. Is this participation? Yes, it is. The child is paying attention to us and waits for our prompts. But should we remain at this level and just accept this? The answer is no. It is important for the adult to observe, but most important to know the child very well and not to continuously give prompts. The motivation for the child should not only be staying in the interaction, but finalizing the activity while interacting with the adult, also with the objects.

3. Implications in Intervention

We propose the term of interaction zone, in which partners, child and adult, come with their own experience, skills, expectations and motivations, emotional states and finalities. This interaction zone is developed and particular to every interaction the child has with other individuals. It is different when he or she interacts with parents, siblings, and members of the family, interveners, specialists or peers within educational settings. Each interaction zone is characterized by proximity, specific and functional language, behaviors, time and space, interruptions, prompts and emotions. The child becomes aware of the particularity of each interaction zone and uses communication skills accordingly.

In this view we suggest the following aspects to be reflected upon:

1) What are the characteristics of a responsive environment that facilitates communication and learning?
2) What are the elements of a high quality interaction between the child and the teacher?
3) How can a holistic approach to the interaction combine the child specific factors and the teacher specific factors and determine higher functionality within the activity that is carried out?
4) What are the competences that teachers should develop and need in order to maintain high quality interactions?

The interaction zone is characterised by the environment, the particularities of partners within the interaction, their communication and the function of communication they are using, motivation, attention, emotions, behaviours, participation, feed-back, reciprocity and awareness of the outcomes of the mutual interaction. The interaction zone is dynamic depending on the behaviours of partners, communication, and interpretation of behaviours, maintained attention, mutual understanding and the intended outcome of the whole interaction. The intended outcome of the interaction refers to the function that is attributed to this process. What is the significance and what is the finality for the child? But also, in the same perspective, what is the significance and what is the finality for the teacher?

In this mater we will analyse the characteristics of high quality interactions and the factors that can influence the outcomes of the intervention programs within this approach. One of the assumptions that we need to start with is that children with multiple disabilities rely on the one-to-one interactions with the teacher in the activities. The initial interactions always refer to the development of a secure and trustful relationship between the child and the adult. Further on, the child will rely on the prompts that the teachers offer as support, he will need the adult's confirmation while carrying out the activity and he will even behave as a response to the adult's verbal or nonverbal behaviour. Sometimes adults are not aware of their own behaviours and they tend to prefer different techniques and methods though they might not be as efficient as others for that particular situation.

We have to mention that a child with multiple disabilities can have various developmental and learning needs that sometimes make it difficult for the practitioner to understand and to meet them. Schertz and Odom (2004) state that the development of joint attention within adult-child interactions represents the foundation for language, social and cognitive development.

One of the modalities that facilitate the observation of one's own behaviours and acknowledgment of the effects of one's own behaviours is self-modelling. Self-modelling is defined as "the change in behavior that occurs from observing oneself on videotape correctly and independently performing only the desired target behaviors" (Hepting, Goldstein, 1996). Self-modelling and observational learning are often used as means for the teachers to model their own behaviours, especially for language development. These techniques are used in detail within the milieu approach implemented in intervention. The milieu approach takes into consideration the needs and interests of the child, the transfer from the control of behaviours to the natural stimuli that will trigger the child's initiative and his functional abilities, not just his responses to adults' behaviours, the importance of immediate feed-back and answers, the need for feed-forward for the child's behaviours and finally the focus on every child's attempt (Rowland, Schweigert, 1993). Adult-mediated teaching episodes that are highly responsive to the child's communicative attempts are part of the regular daily activities and routines (Harjusola-Webb, Robbins, 2012). The Milieu intervention includes strategies such as environmental arrangements, responsive interactions and procedures to prompt, model and consequent the use of new behaviours and language forms in functional contexts. The study that was realised by Harjusola- Webb and Robbins (2012) concluded that improvements in embedded and naturalistic instruction in classrooms are feasible and when adults use strategies that are child directed and responsive to the child's communicative attempts, there are many opportunities to teach many functional skills without disrupting the flow of social interaction or the regular classroom activities. Teachers in the study reported that when the teachers planned for activities that were based on the child's interests, the target children were more likely to remain engaged with the activity for longer periods of time, so that there are more opportunities for the development of abilities.

Proximal communication represents another procedure that allows the development of efficient interpersonal relationships with children with multiple disabilities. The characteristics of this approach are related somehow with the approach of intensive interaction, with the approach of expressing options, though it is different in some aspects (Potter, Whitakker, 2000).

Some elements of proximal communication are:

- the use of interactive movements, falling, tickling, rough movements, adequate to the motor development of the child ;
- the use of minimum verbal input ;
- the use of exaggerated facial expressions and physical reactions in the moment when the adult is the one who leads in the interaction ;
- to alternate active movements with passive movements in which the adult is watching, waiting and responding to the communication initiatives of the child ;
- to establish visual contact, if there is residual sight ;
- to imitate the sounds that are produced by the child;
- to use delayed echolalia concerning the vocal productions of the child, to encourage imitation;
- to focus initially on personal interactions and not on presenting objects;
- to imitate the child's movements, to realise dialogue and to diversify interactions.

Most of the time the prompts that are used by adults in an attempt to encourage communication are questions and instructions. These approaches are inefficient in offering the child's communication an intentional value, the child waiting most of the time to be encouraged to communicate, becoming dependent on verbal prompts. Hale (1987) suggests that the goal of intervention is to encourage the child to communicate as a response to what is happening in the environment and not as an answer to these prompts, thereby becoming more independent. How can we adapt the environment to create opportunities? Miles and Riggio (1999) make the following suggestions to maximize communication and access: visual changes refer to adequate type of lighting, materials with good contrasts, attention given to position and distance, auditory arrangements refer to eliminating distracters and noise, paying attention to sounds and speech, tactual adaptations refer to attention to consistency, interest and security, tactual markings, materials that avoid tactile defensiveness and the use of assistive devices.

Greenspan and Wieder (1999) present the Developmental, Individual- Difference, Relationship model. Within this model, the adult bases his interactions on the child' interests, he imitates the child's behavior and responds to the child' initiations. In this intervention model, the adult is following the child's lead, but it is also very important to model the child's behavior during the interaction as a dynamic and dyadic process. The adult must not become only a respondent to the child's behaviors but he has to determine the child to interpret and understand the effects of his own behaviors on the environment and on the adult that is in interaction with him.

Another approach is the naturalistic behavior-based intervention. Sowden, Perkins and Clegg (2010) describe the concept as the direct teaching technique and point to the importance of training the practitioner as a responsive interactional partner. In this view intervention involves the practitioner knowing how to adapt their interaction to the needs of the child, what effects the adaptation may have on the interaction, and how the child may respond to them. The term of directiveness is introduced as being the degree of control that the practitioner has over the interaction. A strongly directive strategy involves a high degree of compliance from the child, whereas low directiveness allows the child more freedom for self-expression and negotiation. However activities with children with multiple disabilities within their intervention programs are known to be really structured so that the outcomes are achieved. In this view how can a practitioner withdraw from controlling the interaction and focusing only on following the predetermined steps? Many practitioners would say that allowing the child to take over the interaction so that the adult follows the child's lead would not determine the targeted outcomes. But within the study, Snowden, Perkins and Clegg (2010) identified six different levels of directiveness. These are to observe, to describe, to suggest, to require, to instruct and to prompt. The results of the study show that the greatest competence of the practitioner is the ability to be flexible across levels according to the child's needs. Bruner and Seung(2009) pointed out that well-established methods, such as adult prompting and differential reinforcement, have been successfully applied to naturalistic contexts and the results are significant.

4. Conclusions

The interactive approach also facilitates continuous and formative assessment through observation, modification of intervention methods while the intervener is using them, reflecting on the immediate consequences of one's own interaction and communication behaviours. The targeted abilities are developed in relation to previous experiences, with abilities from other domains that are related within a holistic approach, focusing on the interests and level of development of the child.

It is important to focus on the ways that the adult initiates interaction, maintains interaction, on whether he or she is aware of the possible modifications in communication exchanges and activity development contexts.

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