Effectiveness of Intensive Interaction in People With Communication Disorders or Learning Disabilities

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Abstract: Nowadays, the field of Special Education is expanding as more individuals face difficulties that require specialized interventions. Intensive Interaction is a widely known and well-documented method applied to individuals with communication disorders and learning disabilities. Based on the information we gather, Intensive Interaction proves to be particularly helpful, as through various activities, it develops or enhances the individuals' deficient communication skills, thereby allowing them to further develop their social skills and interact naturally with others. The flexibility and adaptability of the method enable its application across a wide range of ages, from infants to mature adults, as well as its implementation by numerous experienced professionals in the clinical field. An in-depth literature review was conducted, presenting a scientifically substantiated evaluation of the method's effectiveness. The collective results and conclusions included in the study were derived from a plethora of research, from which the key elements were isolated and incorporated.

Key words: intensive interaction, autism spectrum disorder, dementia, learning difficulties, special education

1. Definition of Intensive Interaction

One of the most fundamental skills humans possess as members of society is social interaction. Social interaction is referred to as the process where individuals interact with each other within various social contexts. This process includes communication, the exchange of information, emotional reactions, the creation of relationships, and the influence others have on the behavior and development of the individual. Social interaction is an important element of human life and plays a decisive role in the way people develop relationships, perceive the world around them, and shape their identity. It also includes both positive and negative interactions and can manifest on many levels, such as family, social, romantic, professional, and other relationships. The factors that influence social interaction and communication encompass personal communication skills, social and cultural expectations, values, emotions, and the social conditions in which individuals find themselves. Social interaction has a significant impact on an individual's psychological, emotional, and social well-being and is an integral part of human society. Along with communication, it contributes to contact with other people, as well as to the understanding of the world and the reality that surrounds it (Greene & Burleson, 2003).

Intensive Interaction is a thorough and widely known method of intervention for communication and social interaction that helps individuals with communication deficits, severe learning difficulties with or without autism.

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It uses a series of interactive games that take place between an infant and their primary caregiver (Firth, 2006). According to the British Institute of Learning Disabilities (2005), Intensive Interaction is:

"…a practical interaction method for people with learning difficulties who struggle to communicate or to be socially active… In Intensive Interaction, the caregiver, supporter, speech therapist, or teacher attempts to become a better communication partner and to support the individual with learning difficulties, helping them to also develop confidence and fluency."

It is known that individuals with communication difficulties or learning disabilities do not perceive and use their speech in the same way as typical individuals. Consequently, they may exhibit dysfunction in their social skills, such as being unable to make eye contact with their conversation partner or having difficulty taking turns within a discussion. It is common for them to show passive behavior, where they expect everything to happen on its own without trying themselves, or conversely, to be excessively active, making it difficult for others to interact with them. All these behaviors indicate that their communicative development may be at earlier stages.

Intensive Interaction benefits the enhancement of communication for individuals who struggle, allowing their social contacts to develop more effectively. To achieve this, it requires the adaptation of clinical practices to the communication needs and lifestyle of these individuals. The method does not focus on the individual with the difficulty but on the communication partner, who, with the appropriate techniques, will encourage the individual to approach them on their own (Oxfordshire Inclusive Communication, 2023).

In summary, Intensive Interaction increases the quality of relationships for individuals and therefore their quality of life. It is considered more a process than a therapy, with immediate results following the stages of typical development. It thus reveals that an obstacle to normal communication and social connection can be a reversible characteristic of an individual's personality (Moroza-James, 2014).

2. Basic Pre-Linguistic Communication Skills

Communication is a characteristic of living beings and is carried out through words and linguistic symbols, either spoken or written. According to Giffin & Patten (1976), communication is considered the process of creating and assigning meanings, and the exchange of ideas and information between interlocutors. Verbal communication includes speaking via media (telephone, radio, teleconferencing), direct face-to-face conversation, written communication (letters, memos), and electronic communication (email, social media) (Pavlakis, 2013). In contrast, non-verbal communication conveys messages through facial expressions and body movements, complementing or completing verbal messages with emotions and paralinguistic features (Pavlakis, 2013). Communication, whether verbal or non-verbal, is crucial for interpersonal relationships and mental well-being, contributing to social survival and personal development (Βαρδακώστας, 2001).

To reach the pinnacle of communication, however, humans, as infants, go through the period of pre-linguistic communication. During this period, the first principles of communication, known as basic pre-linguistic skills, are established, upon which additional communicative and social acquired skills are developed, useful for adult life. The use of basic pre-linguistic skills in infancy significantly determines the linguistic development of the infant and the emergence of developmental disorders such as ASD (McCathren et al., 2000). Especially for children who have not developed speech by the expected age, it is necessary to identify elements of their pre-linguistic communication as indicators of their future development. Additionally, aspects such as vocal behavior, vocabulary comprehension, symbolic play, gestures, initiation and response to joint attention, parent-infant interactions, and

family linguistic and developmental history have a strong influence on the linguistic evolution of both typically and atypically developing children (Crais et al., 2009).

During the first year of life, infants interacting with their caregivers exhibit a form of early communication. Sounds, facial expressions, the use of gestures, imitation, and other non-verbal means define pre-linguistic communication (Feldman, 2019). The infant promotes these behaviors to express emotions, depending on their environment, and to attract their caregiver's attention. These behaviors are not intentional but rather reflexive and responsive to their environment. Due to their natural inability to communicate verbally, infants are in a preparatory stage, that of pre-linguistic communication, using these behaviors to communicate their needs and desires to their caregivers (Crais & Ogletree, 2016). The basic communication skills they need to develop include eye contact, understanding facial expressions, joint attention, turn-taking, and attention and concentration skills. These skills are essential for a smooth transition to speech and the proper use of language.

Through the method of Intensive Interaction, therapists help individuals with severe learning difficulties and communication disorders learn some of these important skills. Practically, the aim of the communication partner is to create a pleasant social atmosphere with the other person (i.e., face-to-face, turn-taking, interaction sessions). The content of the interaction concerns what happens between two people through the face, voice, and body language. These opportunities for interaction offer individuals with severe learning difficulties the chance to practice speech using basic pre-linguistic skills without pressure. Intensive Interaction can elicit the sounds, gestures, and interests of the individual to promote communication. Therefore, the method focuses on what they can do, not on what they cannot (Nind & Hewett, 2010).

3. Origin of the Method

The method of Intensive Interaction was developed in 1980 at the "Harperbury Hospital School" in England for students with severe learning difficulties, sensory disorders, autism and disabilities (Firth et al., 2020). Before the application of this method, children with severe learning difficulties remained without education. Special Education emerged in 1970 and gave these children the right to education. Influenced by Dr. Gerait Ephraim's theory of "Augmented Mothering", David Hewett and Melanie Nind developed the child-centered approach of Intensive Interaction. The method was presented in 1986 at a conference in Birmingham and was accepted by the scientific community in England. From 1990, and especially after the publication of their first book in 1994, the method began to be widely applied in special schools across the United Kingdom, gaining recognition and acceptance (Nind & Hewett, 2012). In the 2000s, Intensive Interaction was recognized globally, with scientists from various fields publishing research on its application, establishing it on a practical level (Firth, 2011).

4. Who Is It Addressed to

Collaboration with patients often poses a challenge for the smooth progression of the therapeutic plan, depending on the patient themselves and the severity of their disorder. A characteristic example is collaborating with individuals with atypical development, such as children or adults who deviate from typical developmental standards in cognitive, motor, and behavioral domains, impacting their normal progression. Atypical development may stem from genetic, neurological, or environmental factors. In contrast, typically developing individuals exhibit expected and usually predictable development across all developmental domains. Deviation from these norms may suggest developmental delay or disorder, necessitating further evaluation and support from healthcare

specialists (Brown et al., 2020).

Intensive Interaction attracts individuals with minimal or limited verbal communication abilities or those lacking necessary skills to interact with others. They may be in the pre-linguistic stage (without speech ability) or have severe, multiple, and various learning difficulties (Nind & Hewett, 2010). Additionally, it includes individuals who may exhibit repetitive behavioral patterns, aggressive habits, or tendencies towards self-injury (Nind, 1999). However, Intensive Interaction is not universally necessary or beneficial for every individual. Some individuals with severe learning difficulties may possess verbal communication skills or use some form of symbolic-nonverbal communication along with consistent eye contact. They can interact with others, enjoy companionship, and be considered socially active. For this specific group, alternative learning methods would be more beneficial compared to Intensive Interaction. While not contraindicated, its effectiveness is clearly demonstrated in individuals facing more severe challenges, as discussed earlier (Nind, 1999).

Regarding the appropriateness of age for using the method, Intensive Interaction applies across a wide range of ages, from infants to adults. It is a flexible approach that can be adapted to meet the needs of individuals with different developmental levels and communication abilities (Hewett & Nind, 2013). Implementing the method with young children who have severe learning difficulties can prove highly effective, especially when done in collaboration with parents. By following therapists' guidance, parents can effectively teach necessary skills within the safe environment of their home. Naturally, adults can also benefit from these specific communication techniques at any stage of their lives (Nind & Hewett, 2010). The principles of Intensive Interaction can be tailored to each age group with the goal of improving individuals' quality of life. These specific strategies may vary depending on the abilities and goals of each individual undergoing therapy. Some age groups suitable for the method include:

- Infants and toddlers with developmental delays or disabilities to promote early communication and social engagement.
- Children with Autism Spectrum Disorder (ASD), intellectual disabilities, or severe learning difficulties. It can assist in developing communication skills, interaction, and emotional bonds.
- Adolescents: Intensive Interaction can continue to be beneficial during adolescence, especially for individuals with complex communication needs or limited social interaction skills. It can support the development of social communication and promote relationships with peers and adults.
- Adults: Intensive Interaction is also applied to adults with learning disabilities, autism, or other communication disorders. It can enhance communication skills, increase social participation, and improve overall quality of life (Hewett & Nind, 2013).

5. Method's Advantages

Using the comprehensive method, it becomes evident that, regardless of the development of social and communication skills, which is the primary goal, the approach also focuses on restoring self-confidence, taking initiative, and active participation by the individuals they collaborate with. Intensive Interaction contributes to creating a positive and substantial relationship between the individual and the communication partner. It emphasizes the importance of non-verbal communication such as eye contact, facial expressions, and body language to create a bond based on trust and reciprocity. The second main reason for using Intensive Interaction concerns the development or enhancement of communication skills. The method aims to improve communication

skills by starting from the individual's existing behaviors. It focuses on understanding and responding to gestures, movements, and voices of the individual throughout the therapy environment, as needed. In short, through repeated interactions, it encourages the individual to explore and expand their communication repertoire. Furthermore, it also presents the reinforcement of social interaction.

Through Intensive Interaction, social engagement and reciprocity are promoted. By creating and acting within a supportive, interactive, and pleasant environment, it encourages the individual to initiate and respond to social cues, alternate roles, and share activities and desires. An important point to mention is that through therapy, self-confidence and self-expression of the individual are improved. Over time, individuals increasingly adjust their behavior to become as socially appealing as possible. Understanding this specific change gives them confidence in their ability to communicate and express themselves. Another advantage of using Intensive Interaction is the reduction of provocative-aggressive behaviors resulting from communication difficulties. By addressing underlying needs for interaction and communication, the method offers individuals the opportunity to discover alternative ways to express their desires, needs, and emotions. This reduces the frustration caused by difficulty in expression as well as the need for disruptive-aggressive behaviors (Kellett & Nind, 2013).

6. Users of Intensive Interaction

It is evident that Intensive Interaction as a therapeutic method can be utilized by a wide range of professionals. One could be a teacher in a kindergarten or a special school for children with Learning Disabilities and/or Autism. They could also be a support assistant for individuals with these difficulties, or even a parent of a child or adult who believes that the individual's communication skills need improvement. Consequently, anyone who is in the close environment of the child or adult and recognizes the difficulties they face can collaborate and help the individual develop (Nind et Hewett, 2010).

However, Intensive Interaction is mainly applied by speech therapists, special education teachers, occupational therapists, and behavior specialists who have received specialized training in this approach. Anyone else wishing to apply the method should consult professionals from the aforementioned fields who have recognized experience in working with individuals with learning disabilities and/or autism. These professionals are required to have the necessary knowledge in the application of Intensive Interaction techniques and be able to provide guidance and support tailored to the individual's needs. It is also important for them to collaborate with professionals who fully understand the approach, to ensure its correct and effective application.

7. Duration and Frameworks of Intensive Interaction

Interacting with individuals with severe developmental disorders is understandably not always easy. Often, continuous effort and time are required for the first results of therapy to become evident. Regarding the application of Intensive Interaction, its duration can vary due to various intervening factors such as specific therapeutic goals, the needs and abilities of the participants, and even the progress made during the process itself.

Intensive Interaction initially involves building a relationship of trust through which other communication skills, such as non-verbal communication, shared attention, and others, can be brought out. It is easy to conclude that sessions at the initial stage may be brief, lasting from a few minutes or even seconds at times during the day, until a strong bond is formed between the individual and the therapist. Once the duration of the interaction begins to increase, from one minute and beyond, the therapy certainly indicates a good prognosis. The individual actively

participates and engages in communication that lasts longer. In some cases, therefore, individuals may respond positively and show remarkable progress within a relatively short period (a few weeks or months). However, for individuals with more generalized and intense difficulties, more time may be required, often extending to several months or even years of consistent practice and contact.

It is important to remember that Intensive Interaction is not a fixed program with a predetermined duration. It is a flexible and personalized approach that adapts to the needs and progress of everyone. Its duration depends on the specific circumstances and the continuous evaluation of progress (Nind et Hewett, 2010).

Based on all these, another reasonable question arises regarding the most suitable place for this interaction to take place. The answer to this question is simple: anywhere and anytime the individual feels comfortable. It needs to be a space where the individual can be alert yet relaxed and willing to interact. Specifically, it can take place in educational institutions such as schools, special education programs, or other classrooms. Educators and support professionals are in a privileged position to integrate Intensive Interaction into the daily routine and activities of students without disturbing them.

Care and hospitality institutions are also suitable for the method. Individuals living in care facilities such as nursing homes, orphanages, and special care homes can benefit from the application of the method. Staff members, by participating in interactive and communicative activities with residents, promote social engagement and relationship building. It is also common for Intensive Interaction to be applied in clinics and therapy centers, as the method facilitates speech therapists, occupational therapists, and nursing staff to interact with the patient and meet their needs. These spaces provide a controlled and safe environment for individuals working on their communication and social skills, especially if they frequently visit such places.

Finally, Intensive Interaction can also be conducted at home, that is, in the domestic environment with the participation of family members and/or caregivers, allowing family members to establish a way of communicating with their loved ones (Hewett et Nind, 2013). The choice of environment depends on the individual's needs, the availability of resources, and the professionals or caregivers involved in the application of Intensive Interaction. The goal is to create a supportive and interactive environment that maximizes opportunities for communication and social engagement.

8. Principles of Intensive Interaction

There is a need to lay the foundations for more learning and self-confidence in children with communication and social deficits. Thus, Intensive Interaction can offer and help these individuals in a natural and enjoyable way. However, for this process to proceed as smoothly and easily as possible, the communication partner needs to keep certain basic principles in mind. Without the knowledge of these principles, starting would be difficult and could lead to opposite of the desired results.

Some of the basic principles are:
- Initial observation of the individual's behavior
- Availability of the communication partner and "tuning in" with the individual facing the difficulties
- Mutual enjoyment
- The individual takes initiatives and starts the interaction
- No need to rush; space and time are required
- Approval of reactions and new behaviors

- Pauses and waiting during the interaction
- Stopping if the child is tired (Moroza-James, 2014)

It is important to note that each individual we work with will be developed in a different way and at a different pace. For some, even the slightest progress in communication can bring about a significant change in their lives. Specialized professionals will play a crucial role in this process by creating a pleasant and understandable way of interacting with the other person. Intensive Interaction focuses on the child/individual, and therefore, it will often be necessary to "come down" to their level. We work with the patient, not on the patient!

9. Effectiveness of Intensive Interaction

Just as the effectiveness of any intervention is evaluated for the population it targets, the effectiveness of this approach will also be examined. In this chapter, the findings and conclusions from an extensive review of research studies, evaluating the effectiveness of Intensive Interaction in individuals with communication disorders and learning difficulties, will be collectively presented. This analysis concerns specific areas: the effectiveness of the method in individuals with autism, dementia, behavioral disorders, and learning difficulties, with a greater focus on the deficits in the communication and social domains that they may face. This synthesis aims to provide a comprehensive overview of the outcomes and impacts of Intensive Interaction interventions on these diverse populations, along with recommendations for future research and practical applications.

9.1 Autism

Research studies indicate that Intensive Interaction significantly improves the communication skills of individuals with autism, enhancing non-verbal communication, joint attention, and participation in social activities. The interventions help individuals develop more positive social relationships and reduce social isolation (Davies & Jenkins, 2014; Kellett et al., 2019; Firth et al., 2020; Nind & Hewett, 2010). Specifically, the studies by Tee and Reed (2016) and Berry et al. (2013) highlight the improvement in behavior and communication skills through these interventions.

9.2 Dementia

In dementia care, Intensive Interaction contributes to improving communication, social well-being, and reducing loneliness. Research suggests that patients with dementia can better express their needs and emotions and feel more socially integrated (Sutton & Clare, 2016; Stansfield & Williams, 2017; Särkämö et al., 2014). The study by Heap and Wolverson (2018) supports that the approach improves communication, reduces social isolation, and enhances personal well-being.

9.3 Behavioral Disorders

While the volume of research on Intensive Interaction interventions for individuals with behavioral disorders is comparatively limited, the available evidence suggests promising outcomes. Intensive Interaction can improve the communication skills and self-regulation of this specific group, thereby contributing to better behavioral outcomes creating a supportive environment that promotes social engagement and interaction (Emerson et al., 2011; McDonald et al., 2020).

9.4 Learning Disabilities

In the field of learning difficulties, the method of Intensive Interaction has consistently demonstrated its effectiveness. Studies emphasize that Intensive Interaction interventions help individuals with learning difficulties

develop some fundamental communication skills, such as eye contact, initiating interactions, and responding to social cues (Lacey & Ouvry, 2007; Hart & McCaffrey, 2013). As noted by Forbes & Kroese (2010) and Clegg & Hart (2014), Intensive Interaction also fosters a sense of belonging and connection, enhancing the social inclusion of this population in a natural and seamless manner.

10. Conclusions

Overall, the field of Intensive Interaction offers results such as the improvement of communication skills, the enhancement of social relationships, and the increase in the well-being of individuals with these specific disorders. The flexibility of this method is evident as it can be adapted for all age groups, from infants to the elderly. For children and especially adolescents, who are undoubtedly at the most critical age and characterized by a fragile and easily changing psychological state, Intensive Interaction provides a stable foundation that strengthens their communication skills and social relationships, giving them stability and social resilience. Specifically, it significantly enhances the development of communication skills such as maintaining eye contact with the interlocutor, using and understanding non-verbal cues including facial expressions and body language, reducing stereotypical-aggressive behaviors, participating in group activities, shared attention on an activity or object, and turn-taking.

On the other hand, for adults, it provides an opportunity to improve their existing skills, reduce the feeling of isolation they may experience, and develop more active social relationships. Specifically, adults who participated in Intensive Interaction sessions enhanced their communication skills, which brought about positive feelings such as self-confidence and even personality reinforcement. As a result of this enhancement, these individuals managed to engage more in social relationships and situations, interact with less difficulty, and significantly overcome the marginalization they felt. Particularly for adults with behavioral disorders, they additionally achieved a reduction in challenging behaviors that caused numerous problems in the community and integrated into it as active members, having also developed self-regulation strategies.

All the above data demonstrate that despite the difficulties faced by individuals with Autism Spectrum Disorder, Dementia, behavioral problems, and Learning Disabilities, Intensive Interaction is a particularly adaptable intervention method initially due to its ease of application and subsequently due to its ability to be used at all stages of human life. Nonetheless, it should be mentioned that some of the studies analyzed presented limitations regarding the methodology and the way the research was conducted, making the results inconsistent and scientifically incomplete.

However, the journey of Intensive Interaction is not free from challenges and unanswered questions. Each therapist needs to explore the various strategies of this intervention according to the age group, considering the individual variations of the patient, specificities, and difficulties in each case. Furthermore, the long-term effects need to be investigated to better understand the impact of Intensive Interaction according to the developmental level of each individual undergoing Intensive Interaction interventions.

Future research should continue to investigate the long-term effects of Intensive Interaction on communication and social development in individuals with autism, focusing on specific age groups and taking into account individual differences. For example, studies could explore how Intensive Interaction impacts young children differently from adolescents or adults, and how factors such as the severity of autism, co-occurring conditions, and individual learning styles influence outcomes. This nuanced understanding can help tailor

interventions to better meet the unique needs of each individual. Additionally, efforts should be made to disseminate the knowledge and best practices of Intensive Interaction to a wider audience of caregivers, educators, and therapists who work with individuals on the autism spectrum. Training programs, workshops, and online resources can be developed to equip these professionals with the necessary skills and knowledge to implement Intensive Interaction effectively. By ensuring that a broad range of practitioners are proficient in this method, we can maximize the reach and impact of Intensive Interaction, making its benefits accessible to more individuals with autism.

Intensive Interaction emerges as a powerful tool that contributes to the holistic development of individuals facing various challenges. By promoting enriched communication, deep social relationships, and increased quality of life, it offers better solutions. As we advance in this journey of empowerment, fully leveraging the potential of Intensive Interaction is essential through rigorous research and broad application, aiming to transform lives into positive experiences throughout their journey.

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