

Developmental and Communication Disorders in Children with Intellectual Disability: The Place of Early Intervention for Effective Inclusion

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Abstract

The paper attempts to discuss the place of intervention in the developmental and communication disorders of children with intellectual disability for the purpose of providing effective inclusion programme. The definition of early intervention was stated, areas affected by children communication disorder such as language comprehension, fluency, articulation, morphology, pragmatics among others was examined. Guidelines required for providing early intervention and the benefits of early intervention to the child were highlighted.

Keywords: Development, Communication disorder, Early Intervention, Inclusion

Introduction

New findings based on research shows that children's earliest experiences play a critical role in brain development, therefore the old ideas that genes alone determine development have been disproven. This growing scientific evidence supports the need for society to re-examine the way it thinks about the circumstances and experiences to which young children are exposed. Scientists have discovered that early experiences can determine how genes are turned on and off and even whether some are expressed at all (Meaney, 2010; Szyf, 2009a; 2009b). The experiences children have early in life and the environments in which they have them shape their developing brain architecture and strongly affect whether they grow up to be healthy, productive members of the society.

Positive early experiences are essential prerequisites for later success in school, the workplace, and the community. Services to young children who have or are at risk for developmental delays have been shown to positively impact outcomes across developmental domains, including health, (Center on the Developing Child at Harvard University., 2010) language and communication, (American Speech-Language-Hearing Association. 2008; McLean, & Cripe, 1997; Ward, 1999; Joint Committee on Infant Hearing, 2007) cognitive development (Hebbeler, Spiker, Bailey, Scarborough, Mallik, Simeonsson & Singer, 2007, Hebbeler, 2009) and social/emotional development (Hebbeler, Spiker et al, 2007; Landa, Holman, O'Neill, & Stuart, 2010).

Children with established developmental disabilities are susceptible to multiple problems. Many disabilities co-occur, such that children with cognitive delay often must contend with motor impairments, language problems, sensory difficulties, or epilepsy (Boyle, Decoufle & Yeargin – Allsopp, 1994 in Michael, 1998). Early recognition and response system could prevent learning and behavioural problems from occurring later in a child's academic career. This is because most people know, or are taught, at an early age, how to process information and develop an organized plan or strategy when confronted with a problem, whether that problem is social, academic, or job related. Others find such cognitive processes quite difficult. However, students with special needs can be taught effectively using the right learning strategies that will help them approach tasks more easily.

Early intervention provides families with the information and support they need to maximize their child's overall development (Marilyn, 2002). Families participating in early intervention, with the help of professionals, identify services that they believe will benefit their children and themselves. Early recognition and response system could prevent learning and behavioural problems from occurring later in a child's academic career. This is because most people know, or are taught, at an early age, how to process information and develop an organized plan or strategy when confronted with a problem, whether that problem is social, academic, or job related.

Early Intervention

Early childhood intervention is a support and educational system for very young children (aged birth to six years) who have been victims of, or who are at high risk for child abuse and/or neglect. Some states and regions have chosen to focus these services on children with developmental disabilities or delays, but Early Childhood Intervention is not limited to children with these disabilities (Wikipedia On-line Dictionary, 2014).

National Dissemination Centre for Children with Disabilities (2013) described early intervention as a system of services that helps babies and toddlers with developmental delays or disabilities which also focus on helping eligible babies and toddlers learn the basic and brand-new skills that typically develop during the first three years of life, such as: physical (reaching, rolling, crawling, and walking); cognitive (thinking, learning, solving

problems); communication (talking, listening, understanding); social/emotional (playing, feeling secure and happy); and self-help (eating, dressing).

The Centre for Excellence for Children Outcome (2001) asserted that early intervention is intervening early and as soon as possible to tackle problems emerging for children, young people and their families or with a population most at risk of developing problems. The mission of Early Childhood Intervention is to assure that families who have at-risk children in this age range receive resources and supports that assist them in maximizing their child's physical, cognitive, and social/emotional development while respecting the diversity of families and communities (Illinois Department of Health Service, 2013). Effective intervention may occur at any point in a child or young person's life. This imply that early intervention can be remedial or preventive in nature-remediating existing developmental problems or preventing their occurrence.

Early intervention offers specialized services by qualified professionals that are provided in a manner that is compatible with the family's concerns and priorities. According to Wikipedia On-line Dictionary (2014), early intervention is a system of coordinated services that promotes the child's age-appropriate growth and development and supports families during the critical early years. Starting with a partnership between parents and professionals at this early stage helps the child, family and community as a whole. Early intervention services delivered within the context of the family can:

- Help prevent child abuse and neglect
- Mitigate the effects of abuse and neglect
- Improve parenting skills
- Strengthen families
- Improve the child's developmental, social, and educational gains;
- Reduce the future costs of special education, rehabilitation and health care needs;
- Reduce feelings of isolation, stress and frustration that families may experience;
- Help alleviate and reduce behaviors by using positive behavior strategies and interventions; and
- Help children with disabilities grow up to become productive, independent individuals.

Childhood Communication Disorder

Communication disorders include problems related to speech, language and auditory processing which may range from simple sound repetitions such as stuttering to occasional misarticulation of words to complete inability to use speech and language for communications (aphasia) (Psychology Today, 2014). According to Gleason (2001) communication disorder is any disorder that affects somebody's ability to communicate this can range from simple sound substitution to the inability to understand.

The American Speech and Hearing Association (ASHA) (1993) defined communication disorder as an impairment in the ability to receive, send, process, and comprehend concepts or verbal, nonverbal and graphic symbol systems. Communication disorder may be evident in the processes of hearing, language, and/or speech and can also range in severity from mild to profound. It may be developmental or acquired. Individuals may demonstrate one or any combination of the three aspects of communication disorders. Communication disorder may result in a primary disability or it may be secondary to other disabilities.

Department of Health Information for a Healthy New York (2013) concluded that communication disorders may range from sound substitutions to the inability to use speech and language and young children with communication disorder may show delays or a typical development in one or more of the following areas:

- **Articulation:** the motor movements involved in the production of speech sounds. Traditionally, this term was used to refer to phonology and articulation. A typically developing child may have acquired the phonology of the language and yet still make some articulation errors in producing given speech sounds.
- **Fluency:** the overall flow or rhythm of speech production. Typically, speech is produced with relatively few hesitations, few word repetitions, and no part-word or sound repetitions. The flow of speech production is typically without effort or exaggerated facial expressions.
- **Language Comprehension:** (also referred to as reception or processing) the final result and intermediate processes in the analysis and understanding of speech. It includes a series of stages beginning with speech perception, sound identification, identification and access to words, morphological and syntactic analysis, and application of word knowledge. For older children and adults, this term also applies to the ability to understand written language.
- **Language Production:** the spoken or gestural (in American Sign Language) expression of language. The abilities to produce sounds, syllables, words, and sentences that form conversation. For older children and adults, this term also applies to the understanding of written language.
- **Morphology:** the smallest meaningful units in language including words that can stand alone and syllables or sounds that can add meaning to words and the rules for combining these units. For example,

in English, words such as "boat," "book," and "walk" are morphemes (words that stand alone). English also uses a number (although not as many as other languages) of sounds and syllables that can be added to words to modify the meanings of words (such as past tense, plural, etc.). These are termed morphological markers.

- Phonology: the component of language that includes consonants and vowels, sound features, syllables, syllable features (such as syllable stress), and rules for combining sounds and syllables to form words and phrases. For example, in English the maximum number of consonants that can occur in a row is three, and some combinations are not allowed (such as shy).
- Pragmatics: the use of language in context including implicit and explicit communicative intent, nonverbal communication (such as intonation, communicative gestures, facial expressions), social aspects of communication, and discourse (turn-taking, topic maintenance, etc.).
- Semantics: the meaning of words and the meaningful roles of words in phrases or sentence contexts. The definitional meanings of words, including the semantic features of the word "ball" (such as "round," "can be thrown," etc.), the referent categories of words (such as "baseball," "football," "soccer ball," etc.) as well as the meaningful roles (semantic relations, function, or thematic roles such as Agent or Performer of Action) are all part of semantics.
- Syntax: the rules governing the order and relationships among words or phrases in sentences. For example, in English, sentence subjects must be included in sentences (unlike Spanish) and precede the verb. The verb must agree with the subject in number (If the subject is "the boys," the verb must be "run" not "runs").
- Voice: the vocal quality, pitch, and intensity of speech. Typically, speech is produced with smooth and effortless production of voice (vibration of the vocal folds), that is not unintentionally whispered or hoarse.

Inclusion

The basic premise of the integration/ inclusion movement is the principles of anti-discrimination, equity, social justice, and basic human rights which make it imperative that students with disabilities and special needs should enjoy the same access as all other students to a regular school environment and to a broad, balanced and relevant curriculum (UNESCO, 1994; Knight, 1999). Inclusion has academic and social benefits for all students, whether with or without disabilities, such as increased communication and social interaction opportunities, age-appropriate models of behaviour skills, more active participation in the school community, individualized education goals, as well as access to the rich core curriculum (Grenot-Scheyer Jubala, Bishop & Coots, 1996).

The Salamanca Statement calls for a policy shift which would require all schools in the regular school system to become inclusive schools and serve all children, "particularly those with special educational needs" (UNESCO, 1994). Teacher's knowledge, belief and values are brought to bear in creating effective learning environment for pupils, and thus they are a crucial influence in the development of an inclusive system (Reynold, 2001). "Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, create welcoming communities, building an inclusive society and achieving education for all. Moreover they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system."

Guidelines for Early Intervention

Early intervention for children with communication disorder can be provided was a centre based programme such early head start in the United States, a mixed programme as Life start in Australia or as a home-based programmed as done in Britain and Portugal. The programme in some cases are funded by the parents of children undertaking the intervention (fee paying), government funded using tax while others are charity based funded. The family should be involved at every stage of the intervention programmes because the role the family plays in the up-bringing of children with communication disorder and the amount of time the child spends at home with his/her family when compare with other members of the community is enormous.

Wikipedia on-line Dictionary (2014) concluded that goals for the intervention programme are chosen by the family through annual and biannual Individual Family Service Plan (IFSP) which evolves from a meeting where family and staff members talk together about current concerns as well as achievements made by the child. Moreover the parents can serve as teachers when the child is home by working with the child during their free time for at least 1 – 2 hours a week depending on availability.

A key feature of early childhood intervention is the transdisciplinary model, in which staff members discuss and work on goals even when they are outside their discipline: In a transdisciplinary model team the roles are not fixed but a situation in which decisions are made by professionals collaborating at a primary level while the boundaries between disciplines are deliberately blurred to employ a 'targeted eclectic flexibility (Pagliano, 1999).

Benefits of Early Intervention

Early intervention has a lot of benefits especially for the purpose of providing inclusion for children with communication disorder and the programs will minimize or in some cases prevent delays in development of infants and toddlers with disabilities and can decrease the need for special education and related services when a child enters school, and increase independence. Families benefit from early intervention by being able to better meet their children's special needs from an early age and throughout their lives (Hebbeler, Spiker et al, 2007; Bailey, Hebbeler, Spiker, Scarborough, Mallik & Nelson, 2005).

Hackman and Jones (2005) stated that early intervention programme provides the following benefits:

- Enhances intelligence in the children
- Promotes substantial gain in all developmental areas such as physical, cognitive, language and speech, psychological and self-help
- Inhibits or prevents secondary
- Reduces dependence and institutionalization
- Reduces family stress
- Reduces the need for special education services at school age
- Saves the nation and the society substantial health care and education costs

Benefits to society include reducing economic burden through a decreased need for special education (Hebbeler, Spiker et al, 2007; Hebbeler, 2009). Children whose special needs are identified and addressed during these crucial early years have a greater chance of reaching their full potential. Early intervention has both long term and short term effect when used in assisting the special needs children which will further be increased when the stage of intervention is at the early childhood educational level of the child. Early intervention will also go a long way in increasing a sense of belonging, good learning habit and self-care attitude in the child with special during his early childhood education.

Conclusion

The forgoing discussion has shown the need for early intervention in managing childhood development and communication disorder so that the inclusion can be effectively carried out. Early intervention helps children reach their potential when areas of needs are identified early during the crucial stage of development and when included they will not have difficulty relating/coping with their peers. When early intervention is delivered appropriately it will help to reduce the feeling of isolation, stress faced due to communication disorder and frustration. Early intervention will help such children become productive and independent member of the society by improving the child developmental, social and educational gains.

It is hoped parents, special needs teacher and speech therapist would ensure that there is early and proper identification of communication disorder so that that intervention programme can be drawn up for the purpose of facilitating the development of effective communication skill in the child which in turn will enable the child learn with ease, fuse into the society and make meaning contribution to the society. Finally, the future cost of rehabilitation and health care on the child would be reduced because early intervention has provided the need management for averting problems.

References

- American Speech-Language-Hearing Association. (2008). *Roles and responsibilities of speech-language pathologists in early intervention: Technical report*. <http://www.asha.org/docs/html/TR2008-00290.html>
- Bailey, D. B., Hebbeler, K., Spiker, D., Scarborough, A., Mallik, S., & Nelson, L. (2005). Thirty-six-month outcomes for families of children who have disabilities and participated in early intervention. *Pediatrics*, 116, 1346-1352.
- Center on the Developing Child at Harvard University. (2010). *The foundations of lifelong health are built in early childhood*. http://developingchild.harvard.edu/library/reports_and_working_papers/foundations-of-lifelong-health/
- Centre for Excellence and Outcomes in Children and Young People's Services (C4EO) (2010): Early intervention and prevention in the context of integrated services: evidence from Centre for Excellence and Outcomes in Children and Young People's Services and Narrowing the Gap reviews Retrieved from www.c4eo.org.uk September, 2011
- Grenot-Scheyer M, Jubala KA, Bishop KD, Coots JJ (1996). *The inclusive classroom*. Westminster: Teacher Created Materials, Inc.
- Hackman C and Jones K (2005) *Inclusive Practice for Children with Special Education Needs*. In T Waller (ed). *An Introduction to Early Childhood. A Multi-disciplinary Approach* London: Paul Chapman Publishing.

- Hebbeler, K., Spiker, D., Bailey, D., Scarborough, A., Mallik, S., Simeonsson, R., & Singer, M. (2007). *Early intervention for infants & toddlers with disabilities and their families: participants, services, and outcomes. Final report of the National Early Intervention Longitudinal Study (NEILS)*. http://www.sri.com/neils/pdfs/NEILS_Report_02_07_Final2.pdf
- Hebbeler, K. (2009). *First five years fund briefing. Presentation given at a Congressional briefing on June 11, 2009, to discuss Education that works: The impact of early childhood intervention on reducing the need for special education services*. http://www.sri.com/neils/pdfs/FFYF_Briefing_Hebbeler_June2009_test.pdf
- Illinois Department of Health Service, (2013) Early Intervention Retrieved May, 2014 from <http://www.dhs.state.il.us/page.aspx?item=31889>
- Knight BA (1999). Towards inclusion of students with special educational needs in the regular classroom. *Support for Learning*; 14(1): 3–7.
- Joint Committee on Infant Hearing. (2007). Year 2007 position statement: Principles and guidelines for early hearing detection and intervention programs. *Pediatrics*, 120(4), 898-921.
- Landa, R. J., Holman, K. C., O'Neill, A. H., and Stuart, E. A. (2010). Intervention targeting development of socially synchronous engagement in toddlers with autism spectrum disorder: A randomized controlled trial. *Journal of Child Psychology and Psychiatry*, 52(1):13-21. doi: 10.1111/j.1469-7610.2010.02288
- Meaney, M. (2010) Epigenetics and the biological definition of gene x environment interactions *Child Development*, 81(1), 41–79.
- McLean, L. K., and Cripe, J. W. (1997) The effectiveness of early intervention for children with communication disorders. In M. J. Guralnick (Ed.), *The effectiveness of early intervention* (pp. 349–428). Baltimore, MD: Brookes.
- Michael J G (1998): Effectiveness of Early Intervention for Vulnerable Children: A Developmental Perspective. *American Journal on Mental Retardation*, vol. 102, No. 4, 319-345
- Marilyn S (2002). Early Beginnings of Families with Deaf and Hard of Hearing Children Retrieved from www.gallaudet.edu August, 2011
- National Dissemination Center for Children with Disabilities, (2010) Overview of Early Intervention Retrieved from www.nichcy.org/babies August, 2011
- Pagliano, P.J. (1999) *Multisensory Environment*. David Fulton Publishers, London
- Szyf, M. (2009a). Early life, the epigenome and human health. *Acta Paediatrica*, 98(7), 1082 - 1084.
- Szyf, M. (2009b). The early life environment and the epigenome. *Biochimica Biophysica Acta (BBA)*, 1790(9), 878-885.
- United Nations Educational, Scientific and Cultural Organisation (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. Paris: UNESCO.
- Ward, S. (1999). An investigation into the effectiveness of an early intervention method on delayed language development in young children. *International Journal of Language & Communication Disorders*, 34(3), 243–264.
- Wikipedia, (2014) Early Childhood Intervention Retrieved May, 2014 from http://en.wikipedia.org/wiki/Early_childhood_intervention#cite_note-1