

Early Childhood Development in Bangladesh: A Policy Paper

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1. INTRODUCTION

As a matter of right, health, protection and education early childhood development has received appropriate attention in the national activities and documents. According to the Human Development Report 2003, Bangladesh for the first time has been placed in the medium human development group. Poverty reduction gets priority in all the development programmes and plans of the Government. Development of women and children is one of the overarching strategies to address the issue of poverty. Bangladesh has made significant progress in the area of child rights promotion, survival, and development. This is evident from the improvement made in the areas of immunisation, nutrition, primary health care, water supply and sanitation, education, etc. Nevertheless, the general situation of children in Bangladesh needs to improve further since the survival and development of many of Bangladesh's children is still threatened by malnutrition, disease, poverty, illiteracy, abuse, exploitation, and natural disasters.

Both the World Declaration on Education for All (Jomtien, 1990) and the Dakar Framework for Action (2000) have underscored the importance of early childhood care and education (ECCE) as part of a comprehensive approach to achieving EFA. It is a relatively new discipline combining elements from several fields including infant stimulation, health and nutrition, early childhood education and child development. International attention to ECCD has grown out of the recognition that intellectual, emotional and physical development, socialization, and acquisition of culture all interact in shaping a young child's life.

Learning begins at birth. Throughout the world there is growing understanding that the period from birth to the start of primary education is a critical formative stage for the growth and development of children. The learning outcomes – norms and values, knowledge, skills – of primary education are stronger when learning occurs in the years preceding regular schooling. There is also evidence that early learning improves the child's chances of enjoying good health, of finding work later in life, of social inclusion and of being less likely to commit crime.

The early childhood care and education is a derivative of early childhood development (ECD) which has later transformed into early childhood care and development (ECCD) and finally into early childhood care and education (ECCE). While early care and education is very much important for the family, the later part of early childhood i.e., 4 to 6 years may concerns the government and other agencies to intervene for the ultimate success of primary education. Here in this respect the major function of the provider of 'care and education' is to compensate (if possible) the missing components like early stimulation, physical activity, socialization, language skills and emotional attachment. The government may call this programme as 'pre-primary education (PPE)' or 'early care for pre-primary education (ECPE)'.

1.1. The benefits of early childhood care and education

The period of early childhood development has a strong and positive impact on further development and learning in later ages. In the Brazilian PROAPE project, it was found that the total costs of schooling including the early learning programme itself, for pupils up to grade 2 of primary education, was 11% lower for those who participated in ECCE than for those children who did not. In this and other programmes, drop-out and grade repetition on primary education

turned out to be lower as well (Myers, 1992)¹. Similar outcomes were found for the Integrated Child Development Service in India, a project serving 32 million children (Young, 2002)². Besides these international studies research conducted by Plan Bangladesh, BRAC and ICDDRDB indicated that early stimulation and preparation for education enhance student learning in school and increases the possibility of retention up to the terminal grades.

In addition to these evidences, there is a growing body of knowledge resulting from recent developments in brain research that supports ECCE policies. The notion of 'sensitive periods in which certain things are best learned, has been sharpened. It appears that there are very specific and sometimes brief periods in which the developing brain is particularly fit to learn certain tasks. These tasks themselves have also been broken down (for example language acquisition consists of a multitude of sub-tasks with differing sensitive periods) (OECD, 2002)³. After, of before, these periods, it is not be impossible to learn the same tasks (Bruner, 1999)⁴. These findings have the indication that intensified structured learning experiences are required for the children before they enter primary school for their future education.

1.2. Definition of Early Childhood Care and Education

For the sake of our work, therefore, we can adapt the definition given by Evans et al., (2000)⁵ and set it to our purpose. Thus this definition states:

Early childhood care and education means providing all the supports necessary for every child to realize his/her right to survival, to protection, to care and to education that will ensure optimal development from birth to age six.

The right is set forth in the Convention on the Rights of the Child (CRC). It is also a right guaranteed by the Declaration of the World Conference on Education for All (EFA), the World Summit on Children, the Salamanca Statement, the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW), and others.

Development of a child throughout the whole range of early childhood depends on various care giving institutions like parents or family care giver at home or a mini center for child care in the neighbourhood (if available). The first institution, family is entirely independent of any state or network system; however, some kind of neighbouring childhood care center may be brought under an organizational system. It demands the high level focus for childhood development and care.

A recent review of early childhood status in Bangladesh was undertaken by Plan Bangladesh with the help of Abud and Llewellyn (2004)⁶ indicates a clear picture of the very young children in the country. Following are a few glimpses from the review.

¹ Myers, R. (1992) *The Twelve Who Survive: Strengthening Programmes of Early Childhood Development in the Third World*. London, Routledge.

² Young, M. E. (ed.) *From Early Childhood Development to Human Development*. Washington, D. C., World Bank.

³ OECD (2002) *Organization for Economic Coordination and Development. Understanding the Brain: Towards a New Learning Science*. Paris.

⁴ Bruner, J. T. (1999) *The Myth of the First Three Years: A New Understanding of Early Brain Development and Lifelong Learning*. New York. Free Press.

⁵ Evans, J. L et al. (2000) *Early Childhood Counts: A programming guide on early childhood care for development*. Washington D. C. The World Bank.

⁶ Aboud, Frances and Llewellyn, Deborah (2004) *A Scientific Case for Early Childhood Care and Education for Development in Bangladesh*. Plan Bangladesh, Dhaka.

2. CHILD DEVELOPMENT IN THE EARLY YEARS

Children begin their life from conception and travel through various phases of which physical growth and mental capacities are critical. In recent years, research has shown that children are born with many of their senses (hearing and touch) intact, and so are prepared to learn from their environment at birth. Within the first year, children acquire many gross and fine motor skills, comprehend language, and adopt the social skills necessary to maintain positive engagement with caregivers and family. Brain development is rapid in the first three years, with synaptic proliferation and myelination allowing children to learn sophisticated concepts such as causality and language (DiPietro, 2000)⁷. While claims that change is impossible after this age are unfounded, the opportunity to encourage early competencies should not be missed. Brain development requires nutrition and stimulation from the environment. Thus, the physical, mental and social well-being of children is interconnected, and all are necessary for continuous maturation.

As we want most children should survive infancy, therefore it is a need to consider the importance of early childhood development, which focuses on the mental and social aspects of maturation in the first few years of life. Approximately 13% of the population (16 million) is under 5 years therefore, there it has become an important issue in the policies and programs to protect and assure development of this age group. The gravity of the issue is clear since this sizeable segment of the population will become economically productive in little more than a decade and their early life conditions have a long-reach for adult social behavior, human competence, and earning potential.

The first five years are critical to the child's future well-being and productivity for a number of reasons. Not only is this a time when physical milestones are met, allowing the child to move around and explore the environment, but proper nutrition and good health provide the child with energy and a positive attitude toward novelty. During these years, children acquire an understanding of his environment, language, personal and social attributes, culture and art, and finally through literacy many other aspects of life. Children from 0 to 5 years learn mostly by acting on objects in their environment, namely by exploring, manipulating, constructing, and playing with different materials and shapes. They learn by participating in sophisticated verbal dialogue with adults who respond to their initiatives and challenge them to think about their actions and observations. Furthermore, they learn by cooperating and negotiating with their peers. It is therefore necessary to understand their various categories of development from birth through age five. The major categories of developments are discussed here under.

2.1. Physical development

Physical development is the most recognized and observable change in the life of a child. This development is largely contingent upon the child's health and nutritional status. Critical indicators of child health and growth in the early years are well documented. Almost half of children born in Bangladesh are under 2500 gm meaning that they are low birth weight. Of these 43% live in Dhaka slums. Low birth weight children are vulnerable to respiratory and other illness, to continuous low weight, and to cognitive and social delays in the first 5 years (Brooks-Gunn, 2003)⁸. These problems are overcome if the child lives in a healthy, caring, and stimulating environment. However, they are compounded if this is not the case.

⁷ Di Pietro, JA (2000). *Baby and the brain: Advances in child development. Annual Review of Public Health, 21, 455-471.*

⁸ Brooks-Gunn J (2003). *Do you believe in magic?: what we can expect from early childhood intervention programs. Social Policy Report of SRCDC, 17, 3-14.*

In addition, 50% of children under-5 are either moderately or severely underweight and stunted. Girls and boys now show the same rates of malnutrition in Bangladesh (UNICEF, 2000)⁹. Longitudinal studies report on average a dramatic drop in weight for age during the first year. This is due to regular bouts of diarrhea and acute respiratory infection, and to a diet that is mainly rice and dal. In addition to it is speculated that children may not receive food in a responsive manner. If their signals for food are unanswered, children will stop using these signals and may be unable to recognize their own internal cues of hunger. These and other micronutrient deficiencies in iron and iodine have been outlined elsewhere. These deficiencies are associated with delayed cognitive development as well (Huda, Grantham-McGregor, Rahman, & Tomkins, 1999)¹⁰.

Malnutrition has recently been found to hamper social and emotional development as well. Study conducted in Chile shows that malnourished children did not feel as secure in the presence of their mothers as well-nourished children did (Valenzuela, 1996)¹¹. This has a cascading effect on self-esteem, exploration of novelty, and play with peers (Waters et al., 1979). Malnourished children have been found in other contexts to cope poorly with normal stresses arising from the demands of peers and teachers (Fernald & Grantham-McGregor, 1998)¹². In Guatemala, school-aged children who had been malnourished showed less enthusiasm and engagement in group play and more anxiety (Barrett & Radke-Yarrow, 1985)¹³. They were timid in the face of boisterous play and so more likely to be passive onlookers than active participants. Malnutrition therefore affects all aspects of the child's physical development and mental development.

Deficiencies in the physical development would become irreversible if they are not compensated by good food and any other physical stimulation through environmental changes and instruction.

2.2. Mental development

Few studies have examined the mental development of Bangladeshi children. However, children who were part of the BINP nutrition program, and were therefore under 2 standard deviations (z-score) on weight for age, were compared with better-nourished children (Hamadani, oral presentation, 2003)¹⁴. As expected, the better-nourished ones had higher mental development scores at the beginning of the study. This clearly demonstrates a need to provide input to maintain children's level of mental development rather than letting it slip in the early years. However, the most striking research to date shows that programs to enhance mental development in the early years show benefits in the future. Even up to 10 years later, malnourished Jamaican children, who received either stimulation or food supplementation or

⁹ UNICEF (2000). *The state of the world's children*.

¹⁰ Huda SN, Grantham-McGregor S, Rahman KM & Tomkins A (1999). *Biochemical hypothyroidism secondary to iodine deficiency is associated with poor school achievement and cognition in Bangladeshi children*. *Journal of Nutrition*, 129, 980-987.

¹¹ Valenzuela M (1996). *Attachment in chronically underweight young children*. *Child Development*, 61, 1984-1996.

¹² Fernald LC & Grantham-McGregor, SM (1998). *Stress response in school-age children who have been growth retarded since early childhood*. *American Journal of Clinical Nutrition*, 68, 691-698.

¹³ Barrett, DE & Radke-Yarrow, M (1985). *Effects of nutritional supplementation on children's responses to novel, frustrating and competitive situations*. *American Journal of Clinical Nutrition*, 42, 102-120.

¹⁴ Hamadani JD, Fuchs GJ, Khatun F, Huda SN, Grantham-McGregor SM (2003 presentation). *The effect of adding psychosocial stimulation to the nutritional programme of BINP (Bangladesh Nutrition Programme) Centres in Monohardi on the mental and motor development and behavior of malnourished children, and the child-rearing skills of the mothers*.

both when they were less than 24 months, performed better than controls on cognitive and language tests (Walker, Grantham-McGregor et al, 2000)¹⁵.

Similar findings from Bangladesh confirm that there is a strong relation between nutritional status and mental development. There is an almost universal finding that a child's weight and his/her mother's education contribute most to a child's cognitive development. School children with normal iodine levels performed better on a series of cognitive tests and reading/spelling scores than those who were iodine deficient (Huda et al., 1999)¹⁶. Nutrition allows for mental energy in the form of synaptic connections and myelination of the nerve axons; a mother's education often determines how sophisticated and frequent are her verbal interactions with her child, and how much stimulation she provides for herself that may be simultaneously available to her child.

The most important cognitive skill in relation to mental development is language. Children comprehend a considerable amount of speech in the first 18 months, at which point they are usually able to speak in 2-word sentences. However, after 18 months and up to the age of 6 years, language development skyrockets in terms of vocabulary and grammar (Siegler, 1986)¹⁷. Children's expressive vocabulary doubles each year until reaching 6 years; their speech incorporates more sophisticated grammar, and their conversations with others become more prolonged and connected. Their receptive vocabulary, the number of words they understand when listening to adults, is obviously even higher. At each step, these developing language skills serve to expand the child's cognitive understanding of the world. Language acquisition in these early years is learned indirectly through conversation with adults rather than the fellow age mates. Experts now believe that a focus on early childhood vocabulary development may be a pivotal skill for success in learning to read at later age.

2.3. Social and emotional development

Social development begins from the very early stage of life. It entails the acquisition of skills needed to play and work with peers, to communicate with adults, and be aware of social customs within one's community. Emotional development includes acquiring a sense of security in the presence of adults; secure children are more interested in exploring novelty and playing with peers. Social and emotional competencies are commonly identified by teachers as the most important indicators of school readiness in young children (Brooks-Gunn, 2003)¹⁸. Children learn through play, and their play is more cognitively mature in the presence of materials and peers (Eckerman & Whitehead, 1999)¹⁹. Pretend, or dramatic, play, in particular, is known to be a facilitator of cognitive maturation. Pretend play also enhances communication competence and negotiating skills (Fein, 1981). Piaget and his collaborators found that children learn more when they solve problems in pairs, with a friend, than alone or with an adult (e.g., Nelson & Aboud, 1985)²⁰. Therefore, children, social behavior needs to be understood and measured in relation to its function for development. Three types of sociability during play have been identified. They are known to be acquired in the following order: solitary, parallel and interactive. Parallel play begins in the first year of life, moving in to cooperative, social play between age 2 and 3 years

¹⁵ Walker SP, Grantham-McGregor SM, Powell CA & Chang SM (2000). *Effects of growth restriction in early childhood on growth, IQ, and cognition at age 11 to 12 years and the benefits of nutritional supplementation and psychosocial stimulation. Journal of Pediatrics, 137, 36-41.*

¹⁶ Huda et al. (1999) *op sit.*

¹⁷ Siegler RS (1986). *Children's thinking. Englewood Cliffs: Prentice-Hall.*

¹⁸ Brooks-Gunn J (2003). *Do you believe in magic?: what we can expect from early childhood intervention programs. Social Policy Report of SRCD, 17, 3-14.*

¹⁹ Eckerman CO, Whitehead H (1999). *How toddler peers generate coordinated action: A cross-cultural exploration. Early Education & Development, 10, 241-226.*

²⁰ Nelson J & Aboud, FE (1985). *The resolution of social conflict among friends. Child Development, 56, 1009-1017.*

(Howe & Matheson, 1992)²¹. Interactive is the most sociable and involves cooperative play where there is a shared purpose along with verbal and nonverbal exchanges. These levels of social interaction can be observed during children's free play (Rubin, 2003)²². Although children play somewhat differently in different cultures, these three categories of sociability apply in almost all cases. Highly structured early childhood environments do not provide optimal time for free play, thus they prevent the child from developing mature social skills. These skills are important not only for cooperative work but also for self-directed collaborative learning, so important for success in life.

Much has been said about raising a moral child, particularly in urban settings, where acts of violence are increasingly common and positive role models are few. The question of how to help children become moral and at what age is asked. A number of social and emotional skills enhance a person's capacity for moral behavior. Empathy is among the first moral emotions to develop. Children who are abused or neglected often fail to acquire a basic sense of trust and belonging that influences how they will behave when they are older. In fact, longitudinal studies show that most seriously antisocial adolescents exhibited behavioral problems during early childhood. Young people who are born in poverty experience fewer emotional problems and felony arrests if they have attended a preschool program based on child-initiated developmental learning activities rather than direct instruction focused on academics. These findings suggest that the goals of early childhood should not be limited to academic instruction but should also include helping children learn to make decisions, solve problems and get along with others so that they become more personally and socially competent in later life.

2.4. Language development

Language development is the most universal human achievement takes its way from the very beginning of his life after birth. Language consists of several sub-systems that have to do with sound, meaning, overall structure, and everyday use. Knowing language entails mastering each of these aspects and combining them into a flexible communicative system. Mastering this skills starts with 'cooing' around 2 months of age and then 'babbling' appears in around 6 months in which infants repeat consonant-vowel combinations in long strings, such as 'babababa' and 'nananana' etc.

Infants learn language from the conversation of the adults. As the baby matures and listens sounds and words she tries to imitate that beginning with cooing and babbling. Language input is necessary for language development. Within the brain there few language and speech areas which develop entirely on the basis of external language inputs. When a child is born with shortage of hearing, meaning language input hampered, his language area in the brain remain under developed so the language or speech do not appear or appear deformed. Besides the language inputs better nutrition is also required for production of language and comprehension. Nutrition plays a significant role in the 'myelination' (insulating the nerve fibers) of neurons. A well nourished child if exposed to plenty of adult talk from the very beginning of his life the baby will grow up with more mature language and undistorted sounds.

²¹ Howe, C & Matheson CC (1992). *Sequences in the development of competent play with peers: Social and social pretend play. Developmental Psychology, 28, 961-974.*

²² Rubin K (2003). *Play Observation Scale: A Manual for coding free play behaviors of young children. University of Maryland.*

2.5. Hierarchy of development during infancy

Development of language is a complex process but it occurs naturally with the inception of certain biological mechanism and environmental inputs. All the phenomena do not occur at a time but they appear in a hierarchical manner but some occur at a time with different magnitudes. When the hierarchy is maintained the development becomes uniform and reaches at a successful level. However, when the hierarchy is not maintained the development is disturbed and jeopardized. Following figure provides a schematic representation of such hierarchy in the early childhood developmental support.

Health, nutrition and protection come first in the developmental support. This aspect should get the optimum attention from the period of conception and after birth it should continue until the age of five so that the child reaches to a threshold level. The second focus should be the language where it starts from infancy, may be from first month. Language development has some link with nutrition so both support should go together. Social and emotional development largely comes with language and communication. The more a child receives the opportunity of social contact with children and adult, his language, communication and cognition will enhance. The concept of art and culture is very close to social development. Children learn to imitate whatever they see and feel others do. Language helps them to communicate the social and cultural norms. Rhymes, rhythms and gestures are easily integrated into the socio-linguistic development of a child.

The next component, environment, is not the part of development but it is the catalyst of development. Where environment is not supportive development hampers. Children require development supportive environment i.e., more safe, interactive and persistent so that they can adapt themselves both physically and mentally to the situations. Environment can make a child intelligent, creative or unimaginative and indifferent on the contrary. Unless the initial developments are smooth in hierarchical order the environmental effect would not have its optimal impact. The next tow components in the hierarchy are literacy and knowledge and skills of science and technology. They are the highest cognitive and affective components of development. The school or any other social institute may have influence the development onward.