Six reasons to support early childhood care and education

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There are six compelling reasons to support and invest in early childhood development and this chapter discusses them in the context of child rights, scientific rationale, social/gender equity, economic benefits, social mobilisation and a way to achieve international developmental goals, with a specific focus placed on the scientific rationale.

Ensuring children’s rights from the start of life

Early childhood is a critical period for realising children’s rights. Ensuring the right of every child throughout the early childhood years (from birth to the transition to primary school)\(^9\) is an obligation of all carers, including parents and primary caregivers, communities and various service providers, governments and civil society as a whole.

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9. The CRC’s General Comment No 7 (2005) defines early childhood years from birth and throughout infancy, including pre-school years as well as during the transition to school.
While there are several human rights instruments specific to children’s rights, the *Convention on the Rights of the Child* (CRC) is the most widely ratified human rights treaty specifying rights of children in the world. It rests on four general principles and rights in early childhood:

- the right to life, survival and development to ‘the maximum extent possible’ (Article 6)
- the right to protection from discrimination (Article 2)
- the best interests of the child shall be the primary consideration (Article 3)
- the right to express views and those views to be given ‘due weight’ (Article 12).

Recognising parental responsibilities for the child ‘to provide, in a manner consistent with the evolving capacities of the child, appropriate direction and guidance’ (Article 5), the CRC also notes that signatories should ‘…render appropriate assistance to parents and legal guardians in the performance of their child-rearing responsibilities and shall ensure the development of institutions, facilities and services for the care of children’ (Article 18).

Other articles relevant for young children include: health and social services (Article 24), standard of living (Article 27), education (Article 28), aims of education (Article 29), and leisure, recreation and cultural activities (Article 31). Several other articles specifically recognise the rights of children in need of special protection.

Children’s rights are also guaranteed in the *Declaration of the World Conference on Education for All (EFA)*, the 1990 World Summit for Children and the 1994 UNESCO *Salamanca Statement and Framework for Action on Special Needs Education*. There are also complementary rights guaranteed in the *Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)*.

10. Abuse and neglect (Article 19), children without families (20, 21), refugees (22), children with disabilities (23), harmful work (32), substance abuse (33), sexual abuse and exploitation (34), sale, trafficking and abduction of children (35), deviant behaviour and lawbreaking (40). See General Comment No7. *(CRC, 2005)* for further explanation of these articles in relation to young children.
Scientific rationale

Vast amounts of research from the fields of physiology, nutrition, health, sociology, psychology, and education continue to confirm the evidence that the early years of life are the most crucial periods for healthy development and well-being. Children are born with physical, social and psychological capacities that allow them to communicate, learn, and develop. If these capacities are not recognised and supported during the early childhood years, they will wither rather than flourish. Research (e.g. Shore, 1997) suggests that most of the development of intelligence in children occurs before the age of seven, with the first three years being particularly important, as this is when development occurs more rapidly than at any other stage in life.

Development is multi-determined and varies as a function of the child’s nutritional and biomedical status, genetic inheritance, and social and cultural context. From the moment of conception, important developments occur that affect the brain, the physical body and the chemistry of the child.

Brain development

The early childhood years are particularly critical in terms of brain maturation, determining how the brain (and the child) will further develop and function throughout life.

At birth, a child’s brain is small, but it contains about 100 billion neurons (or nerve cells)—all the cells it will ever have. However, at this stage, most of these neurons are not connected to each other and cannot function on their own. After birth, no new neurons are formed in most regions of the brain. Instead, the brain produces trillions of synapses that connect each neuron and form neural pathways, which allows all of the various areas of the brain to communicate and function together in a coordinated way. During the first two to three years of life, the number of synapses increases twenty-fold. The formation of new synapses occurs throughout life (the brain producing more synapses than it will ever use), but is at its peak during the first three years.
While new synapses are constantly being formed, others that are not used start to be eliminated or pruned away around the time of one’s first birthday. By keeping only the connections that are frequently used, pruning actually increases efficiency of brain work. (It is also true that ‘over-pruning’ can occur when a child is deprived of normally expected experiences in these years.) The pruning of synapses continues throughout the childhood years as the different areas of the brain develop.

As shown in Figure 1, critical periods are stages of development for particular parts or functions of the brain, when the brain is most open to new experiences. Early childhood, therefore, is a period of time when a child's experiences have a great effect on the child’s development and learning. How people around the child provide all-round care and developmentally appropriate stimulation in a safe and nurturing environment really matters.

**Figure 1** Some critical periods of brain development

![Brain development: Some critical periods](image)


Providing opportunities for complex perceptual and motor experiences at an early age favourably affects various learning abilities in later life and can even compensate,
at least partly, for deficits associated with early malnutrition (The Consultative Group on Early Childhood Care and Development, 1996). By age six, most of these connections are made (or not, as the case may be). This means that if these sensitive periods pass by without the brain receiving the stimulation for which it is primed, opportunities for various kinds of learning may be substantially reduced.

The brain’s malleability also means that there are times when negative experiences or the absence of good or appropriate stimulation are more likely to have serious and sustained effects. For example, when children do not get the care they need during developmental prime times, or if they experience starvation, abuse or neglect, their brain development may be compromised and such negative experiences may leave a lasting imprint on young minds, thereby contributing to the compromised child’s developmental outcome.

The recent series on ‘Child development in developing countries’11 published in The Lancet (Grantham-McGregor, Cheung, Cueto, Glewwe, Richter & Strupp, 2007) states that young children (especially those in developing countries) are faced with multiple risk factors, which have a detrimental effect on all domains of development: cognitive, language, motor and social-emotional. The risk factors include poverty, malnutrition and poor health, and unstimulating home environments. The review estimates that more than 200 million children under five years of age fail to reach their potential due to such causes.

**Poverty**

Poverty puts young children and their families at a disadvantage in all aspects relating to the quality of life. Relating to the risk factors for poor child development, poverty is usually associated with inadequate food, poor sanitation and poor hygiene, all of which lead to increased infections and stunting (small height-for-age, which is caused by chronic undernutrition) in children. Poverty

11. The Lancet 2007 ‘Child development in developing countries’ series consists of three reviews, (1) Developmental potential in the first 5 years for children in developing countries, (2) Child development: risk factors for adverse outcomes in developing countries, and (3) Strategies to avoid the loss of developmental potential in more than 200 million children in the developing world.
is also associated with poor maternal education, increased maternal stress and depression, and inadequate stimulation in the home. As poor families are often faced with multiple risk factors simultaneously, the developmental deficits of young children will increase with the number of such risk factors. Poor development leads to poor school achievement, which is further exacerbated by inadequate schools and poor family support (due to economic stress and little knowledge and appreciation of the benefits of education). Such being the case, the vicious cycle of poverty continues. (See Figure 2.)

**Figure 2 Pathways from poverty to poor child development**

![Pathways from poverty to poor child development](Source: Grantham-McGregor et al., 2007)

**Biological factors: nutrition and health**

*Intra-uterine growth restriction (Maternal nutrition and health)*

Intra-uterine growth restriction indicates constraints in foetal nutrition during a crucial period for brain development, particularly in developing countries, due to poor maternal nutrition and infections (Walker, Wachs, Gardner, Lozoff, Wasserman, Pollitt & Carter, 2007). Babies born to ‘at risk’ mothers (e.g. small, young, underweight and anaemic) in a state of poor nutrition run a greater risk of having a low birth weight. Many studies indicate the association between low birth weight and developmental deficits, especially in the cognitive domain, up to three years of age, and a few studies (in developed countries) report that the effects remain into adolescence (Breslau, Paneth &
Lucia, 2004) and adulthood (Strauss, 2000). Special care for pregnant mothers is vital—adequate food (quantity and quality), prevention from illness and infectious diseases, and a nurturing and stress-free environment. Such care for those ‘at risk’ mothers can break the intergenerational cycle of compromised growth and development.

**Childhood under-nutrition**

Stunting is caused by poor nutrition, often compounded by infectious diseases. Growth faltering begins soon after birth, 6 – 24 months being a critical period for babies who are normal at birth (and in-utero for babies born to ‘at risk’ mothers). It can continue to around 40 months, after which it levels off, but most stunted children remain stunted through to adolescence and adulthood.

Stunting is caused not only by inadequate food intake but also by infections, intestinal parasites (due to poor sanitation and hygiene), diarrhoea and illnesses that can interfere with the processes of digestion, absorption and transportation of nutrients to the cells.

Many studies have noted significant associations between early stunting and later cognitive ability, school performance and drop-out rates. Compared to non-growth-retarded children, stunting and being underweight are also associated with poor psycho-social development, including apathy, less positive affect (i.e. their emotional reactions tend to be less positive), lower levels of play, more insecure attachment during early childhood, and poorer attention and social relationships at school age (Grantham-McGregor *et al.*, 2007).

Micronutrient deficiency also contributes to a child’s compromised development. Iodine deficiency leads to congenital hypothyroidism and irreversible mental retardation, making it the most common preventable cause of mental retardation. Children’s anaemia—half of which is thought to be iron-deficiency anaemia—leads to poorer mental, motor and social-emotional development compared to children without anaemia.
Synergistic effects by biological and psychosocial factors on child development outcomes

Scientists are accumulating a deeper understanding of the mechanisms through which both biological and environmental factors act synergistically to exert a powerful influence on brain development and behavioural outcomes. There are many studies on the correlations between a child’s nutrition and development outcomes in both developed and developing countries. A study from Jamaica (see Figure 3) has proven the synergistic benefits of early childhood development programmes on developmental outcomes, with supplementation and psychosocial stimulation for disadvantaged children’s (stunted) promoting developmental outcomes (Grantham-McGregor et al. 1991).

**Figure 3** Interventions with stunted children in Jamaica

Source: Grantham-Mcgregor et al., 1991

**Psychosocial factors: Quality of child-caregiver interaction**

Development is affected not only by a child’s nutritional and health status, but also by the kind of interaction a child develops with the people and objects in her/his environment. A secure, safe, nurturing environment encourages a child to play, explore, solve problems, talk, listen, develop skills, learn to trust, etc. All
these experiences build a strong psychosocial and biological basis for growing up as a healthy, curious, caring child. Good quality psychosocial care and education means that adults create a safe and nurturing environment, and facilitate learning by interacting with children sensitively and responsively, and by providing them with age-appropriate and stimulating materials. (It is important to note that learning materials do not need to be expensive toys.) The caregiver’s emotional warmth, mood and emotional state (e.g. maternal depression, exposure to violence) are also key psychosocial factors (Walker et al. 2007). These factors are discussed next.

**Cognitive stimulation and learning opportunities**

Studies from around the world, such as the Jamaican study, report significantly higher cognitive functioning in young children who are given supplemented cognitive stimulation or learning opportunities compared to non-stimulated groups of children. Beneficial effects reported also include non-cognitive outcomes such as better task orientation, social behaviour, self-confidence and positive affect. The Jamaican study reported the benefits of stimulation on child developmental outcomes during a two-year intervention period, but it has also proven the long-term positive effects. The follow-up to the Jamaican study found that the cohort with stimulation during the early childhood years had sustained benefits in emotional outcomes and attention after 16 years.12

**Caregiver sensitivity and responsiveness**

When a caregiver is aware of the child’s needs and wants through her/his communicative signals and responds to these signals consistently and appropriately, the child develops a secure attachment with the caregiver. Such secure attachment relationships, once developed, can have a positive effect on right brain development, which processes socio-emotional functions, regulates bodily and affective states, and also controls and copes with stress-reactivity (Schore, 2001). High stress reactivity causes cognitive disruption and high levels of emotionality (e.g. hyperactive, anxious or impulsive behaviour), which interfere with intellectual

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12. Note: outcome measures studied are: anxiety, depression, self esteem, and antisocial behaviour assessed by questionnaires administered by interviewers; attention deficit, hyperactivity, and oppositional behaviour assessed by interviews with parents. The group who received supplementation only did not show significant effects.
and social functioning (Shonkoff & Phillips, 2000 cited in WHO, 2005). Children who experience extreme stress in their earliest years are at greater risk than peers without this stress of developing a variety of cognitive, behavioural and emotional difficulties. Conversely, children whose mothers interact with them in consistent, loving ways will be better nourished and less apt to be sick than children who are not so attended (Zeitlin, Ghessemi & Mansour, 1990).

**Caregiver mood and emotional state (maternal depression)**

Caregiver mood and emotional state influence caregiver behaviour. Caregivers who are in a cheerful mood can interact with children more positively—with sensitivity and responsiveness—while depressed caregivers are less involved, less sensitive and more negative when interacting with the children in their care. Research has consistently found that reduced levels of cognitive function and higher levels of behaviour problems are reported in young children of depressed mothers (WHO, 2004).

**Exposure to violence**

Although there are few studies from developing countries available to date on infants and pre-school children dealing with exposure to armed conflicts and/or community violence, existing research (of South Africa and Israel) show higher levels of post-traumatic stress disorder, aggression, attention problems, and depression among children exposed to violence (WHO, 2004). This negatively affects the children’s cognitive and socio-emotional competence. The negative effect of exposure to violence is likely to be increased when family cohesion or the mental health of primary caregivers is disrupted. There is a crucial need for intervention studies with younger children and their caregivers who are exposed to violence.

**Promoting social equity**

By providing a ‘fair start’ to all children, it is possible to modify distressing socio-economic and gender-related inequities. The unhealthy conditions and stress associated with poverty are accompanied by inequalities in early development and learning. These inequalities help to maintain or magnify existing economic and social inequalities. In a vicious cycle, children from families with few resources often fall quickly and progressively behind their more advantaged peers in their mental
development and in their readiness for school and life, and that gap never closes. Among many other benefits, early childhood development programmes can help reduce gender inequality. They can compensate for the priority that is given to boys in access to basic health care and schooling in some societies. Efforts to break negative models of gender socialisation that marginalise and devalue girls and affirm boys, or the reverse, need to start with the earliest socialisation of the child, well before the age of six. Fortunately, access to early childhood programmes is relatively gender-equal in a majority of countries (UNESCO, 2006).

In addition, the rights of children cannot be realised if the health and well-being of women are not addressed. Women who are sickly, hungry, oppressed and discriminated against cannot have the ability, willingness and motivation to nurture their children adequately. Children cannot flourish when women’s rights are not respected. Coordinating and integrating interventions on maternal health with efforts focused on child survival, growth and development can enhance the efficacy of each intervention. Removing barriers to the rights of women and girls, and achieving gender equality is a critical component of the integrated approach to early childhood care. Interventions are also designed to increase the role of fathers in the care and protection of children.

Nations are faced with the problem of how to define and approach equity under conditions of extreme poverty, when there is also a tendency to try to shift responsibility from government to the people, including the poor. Inaction is not the answer. By failing to intervene in an opportune way to foster early childhood learning and development where conditions are difficult, governments tacitly endorse and strengthen existing inequalities. Here the idea is not only to provide a minimum package of inputs so we can point to equality of opportunity, but also to provide additional inputs where needed to ‘level the playing field’ socially and economically.

**Economic benefits**

Early childhood development programmes improve health, nutrition and educational outcomes of young children and the positive impact can be drawn both in the short term and, to some extent, the long term at individual level.
Society at large also benefits economically from its investment in early childhood development programmes through increased economic productivity over the child’s lifetime, increased employment options for caregivers to earn and learn, and by the later cost savings in remedial education and health care as well as rehabilitation services and welfare.

Perry (1996) discusses the relationship between expenditure on programmes after the early years with respect to learning, behaviour problems and health throughout the life cycle against expenditure during the critical years of brain development. The most important opportunities to influence brain development are during the prenatal and infancy periods of life, when public spending on health, education and welfare for infants and expectant mothers is very low. With increasing age, health and welfare spending tends to increase. Prevention is far less expensive than treatment, and is more efficient.

Heckman (2006) argues that investing in early childhood development is based on economic efficiency: ‘It is a rare public policy initiative that promotes fairness and social justice and at the same time promotes productivity in the economy and in society at large. Investing in disadvantaged young children is such a policy.’

In terms of benefits:costs ratios of early childhood programmes, the High/Scope Perry project in the USA suggests that the returns on a pre-school investment (4 – 6 year-olds) can be as high as seven-fold at primary level, and 17 times at the age of 40 (Schweinhart et al., 2005). While rigorous analysis in developing countries is still limited, existing studies indicate a potentially high rate of return on investment in early childhood (UNESCO, 2006). Meyers (1998) projected the impact of pre-primary childcare interventions for 4 – 5 year-olds by estimating the cost savings through reduced waste in primary schools due to repetitions and drop-outs at Grade 1. This study finds that the use of government and community resources for early childhood initiatives would have a tremendous impact in terms of savings by reducing the level of wastage in Class One of the primary system. Both Meyers and Schweinhart et al. further argue that if we made even earlier interventions for 0 – 3 year-olds, this would bring higher economic benefits over time. Such prognostications encourage renewed focus and greater public investment in prenatal, perinatal and infant care.
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An entry point for social mobilisation

Early childhood programming can serve as an important entry point for community and social mobilisation, promoting participation, organisation and a better quality of life for older as well as younger members of the community. This is particularly true in times of emergency. The child is an organising factor in responding to emergencies. In keeping with the principles of the CRC, the humanistic value of the child assumes a central pervasive position in the conceptual framework for the survival, protection and development of the child in an emergency situation.

In almost any community, children provide a rallying point for social and political actions that can help to build consensus and organisation for the common good. Although children cannot vote, politicians, particularly at local levels, are coming to appreciate the fact that children can be a focal point in building consensus and solidarity in the communities they live in. In general, parents are concerned about a better future for their children and are often willing to collaborate and sacrifice to meet that end. This mobilising potential of early childhood programmes can help to reinforce participatory decentralisation and local democracy.

An investment in early childhood programmes can be an investment in the creation of a more educated citizenry. Indeed, the form and content of most pre-school education (active learning, group interaction, etc.) lend themselves to producing those traits considered essential to democracy—more than the form and content of most primary schooling as it is presently constituted. Whereas primary schooling continues to be oriented towards an unquestioning, essentially authoritarian relationship between teacher and child, a premise for most pre-school programmes is that a child learns best by doing, exploring, questioning and problem-solving, with teachers facilitating rather than dictating the process.

Achieving international development goals

An investment in the survival and thriving of young children is fundamental to the attainment of international development goals. A holistic approach is the key to meeting the ‘imperatives for children’ of UNICEF’s Global Movement for Children—ensuring a good start in life for every child, caring for every child,
investing in children etc.—and is an essential contribution to progress towards the World Fit for Children goals and the UN Millennium Development Goals (MDGs). To achieve the MDGs of reducing poverty and ensuring primary school completion for both girls and boys, governments and civil society should consider expanding high quality, cost-effective early childhood development programmes.

Early Childhood Care and Education (ECCE) is the first of the six Education For All (EFA) goals. The ECCE goal itself—expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children—is what the international community and all governments need to achieve. Investment in ECCE should also be recognised as a requisite in achieving the other EFA goals as the initial part of lifelong learning.

**Conclusion**

This chapter has attempted to show that there is overwhelming evidence from scientific studies, as well as from accumulated data relating to social and environmental factors worldwide, to convince governments that supporting and investing in ECCE is essential. The healthier the child, the healthier the nation.

**References**


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