

EXECUTIVE SUMMARY OF “CHILD DEVELOPMENT” LANCET SERIES (2011)

In 2007, the first Lancet Childhood Development series estimated that more than 200 million children under the age of five in low- and middle-income countries were not attaining their development potential. The primary causes were poverty, nutritional deficiencies, and inadequate learning opportunities. Four major risks were identified: growth retardation, iron deficiency, iodine deficiency, and lack of cognitive stimulation. There was growing evidence that interventions were effective in preventing the loss of developmental potential, particularly if the interventions occur early in life, are of high quality, and reach the children in the greatest need. However, without action, millions of children would continue to be at risk of delayed development, undermined potential, and the perpetuation of the cycle of poverty.

In 2011, a follow-up Lancet series examines new evidence on both risks and protective factors for early childhood development, reports new evidence on programme effectiveness from 42 studies and programme evaluations, examines the cost of not investing in early child development programmes, and calculates the potential benefit/cost ratio of investments.

The inequalities in child development in low- and middle-income countries are increasing. The latest series reveals that inequalities in child development often begin before birth and continue through the first years of life. Interventions during this early period are the most effective and cost-efficient mechanisms to reduce inequalities and advance the physical, social and economic prospects of children, and – ultimately – entire countries.

ACKNOWLEDGMENTS

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KEY MESSAGES

1. Exposure to biological and psychosocial risks affects the developing brain and compromises children’s development.
 - a. The primary risks are poverty, malnutrition, and lack of stimulation.
 - b. Cognitive stimulation, breastfeeding, and maternal education can protect children from risks.
2. Inequalities in child development begin prenatally and in the first years of life, and increase over time.
3. Disparities widen when children experience multiple risks.
4. Reducing inequalities requires early integrated interventions that reduce risks and promote child development.
5. The most effective and cost-efficient time to prevent inequalities is early in life.
6. Parenting interventions and center-based programmes (preschools) can improve children’s development.
7. Quality in Early Child Development programmes can be maximized through design, curriculum, parent involvement, and training and supervision for workers
8. Increasing preschool enrolment in each low- and middle-income country would result in a benefit of between US \$10 - \$34 billion and a benefit-to-cost ratio of between 6.4 - 17.6:1 depending on percent of children enrolled.
9. To prevent disparities, governments need to allocate more resources to quality Early Child Development programmes for disadvantaged children.
10. Action or lack of action will have lifetime consequences for adult functioning, for the care of the next generation, and for the wellbeing of societies.

This Executive Summary presents key points from the two Lancet papers from the 2011 follow-up series: “Child Development 1: Inequality in early childhood: risk and protective factors for early childhood development” and “Child Development 2: Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries.”

Causes and Consequences: A summary of “Child Development 1: Inequality in early childhood: risk and protective factors for early childhood development”

Inequality in child development can begin before a baby is born and continues in the early years through poverty-related risks that impact children’s developing brains. The foundations of brain architecture are laid down through dynamic interactions of genetic, biological, and psychosocial factors. Risks associated with poverty, such as excessive stress and lack of stimulation often have negative effects on brain development. On the other hand, positive interactions with caregivers and early learning opportunities can have positive effects on brain development. For a child born into poverty, risks often co-occur and persist. Exposure to multiple and cumulative risks has a particularly adverse impact on brain development and on child development.



MATERNAL NUTRITION

Maternal undernutrition contributes to low birth weight and may cause developmental delays with evidence for lasting effects on children’s mental health into adulthood.

INFANT AND CHILD NUTRITION

New studies provide additional evidence linking poor growth in utero and early developmental delays. Ensuring that children have adequate nutrition from birth to age 2 years continues to be critical for early child development. Chronic undernutrition leading to poor growth in length remains one of the most prevalent and important risks for poor development. Nutritional strategies to prevent growth retardation can have lasting benefits for adult education and income. Iron deficiency in infancy can have long-term effects on cognitive, motor, and psychological functioning even when the deficiency is treated, emphasizing the importance of ensuring adequate iron nutrition early in life. Provision of other micronutrients and essential fatty acids may provide additional benefits for development. Studies reviewed showed that breastfeeding is a protective factor resulting in improved intelligence and school attainment.

INFECTIOUS DISEASES

HIV and severe or repeated attacks of malaria affect the cognitive development of millions of young children globally. Protecting children from these and other infectious diseases and ensuring early treatment are effective strategies to prevent or lessen the negative effects of infectious diseases. Support for families affected by HIV can reduce the impact of associated risks such as disrupted caregiving and mental health problems.

DISABILITIES

Children with disabilities face additional risks through reduced access to school or health services, and increased caregiver stress and depression. Parent training interventions can improve parental coping and child development. Strategies for inclusion of children with disabilities in services are needed.

PSYCHOSOCIAL FACTORS

A lack of stimulation and early learning opportunities is a major risk for delayed development. Interventions to improve parent-child interaction and provide opportunities to play and learn benefit children’s cognitive and social-emotional development. Benefits can last through to adulthood. Teaching parents these skills through home visits, counseling at health centres, and combined approaches have benefited children’s development.

Mother Activities by Region and Wealth Quintile

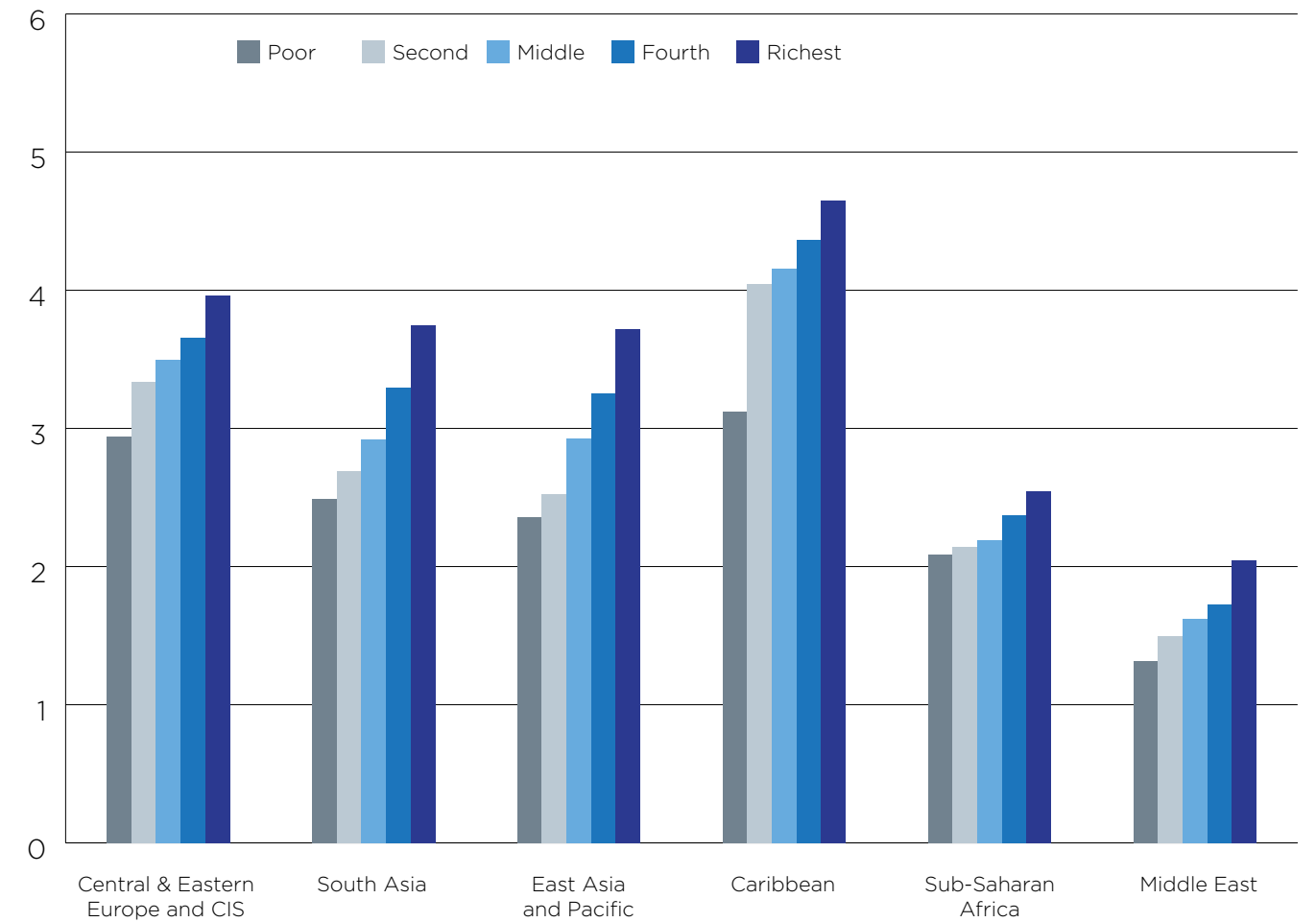


FIGURE 1.

Mothers’ child-centered activities in the past three days by sampled countries within region and within country wealth quintile for 38 countries. Data are from the UNICEF’s 2005 Multiple Indicator Cluster Survey 3.

Maternal depression affects mothers’ ability to provide warm, stimulating, and consistent care. Community-based programmes can be effective in reducing depressive symptoms and expanded access to these interventions is needed to benefit mothers and children.

Societal violence increases stress and negatively affects child behavior. Interventions to support family functioning are needed to reduce the impact on children and families exposed to societal violence.

Children raised in institutions are at risk of delayed development due to changes in brain development associated with lack of a consistent caregiver, inadequate stimulation, and poor nutrition.

PROTECTIVE INFLUENCES

Protective influences, such as breastfeeding and quality caregiver interaction and stimulation, lessen the negative effects of exposure to risks and promote development. Mothers’ education is an important protective influence, as better educated mothers generally provide better quality caregiving and are more likely to use available services.

Interventions and Opportunities: A summary of “Child Development 2: Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries”

Much of the evidence for the effectiveness of Early Child Development programmes comes from high-income countries. The papers in this Lancet series are unique in focusing on research and programme evaluations in low- and middle-income countries. The programmes in these countries are designed to address the risks to child development outlined in the first paper.

INEQUALITIES BETWEEN AND WITHIN COUNTRIES

Social and economic disparities during childhood have been associated with negative health and economic indicators during adulthood. The series presents new data showing that children in the highest income quintile within countries are more likely to have higher quality stimulation in the home (Figure 1), more than twice as likely to attend preschool (Figure 2), and have higher language performance, compared to children in the lowest income quintile. These findings are consistent with conclusions reached by the WHO Commission on the Social Determinants of Health.

Percentage of 3 & 4 Year Olds Attending Preschool

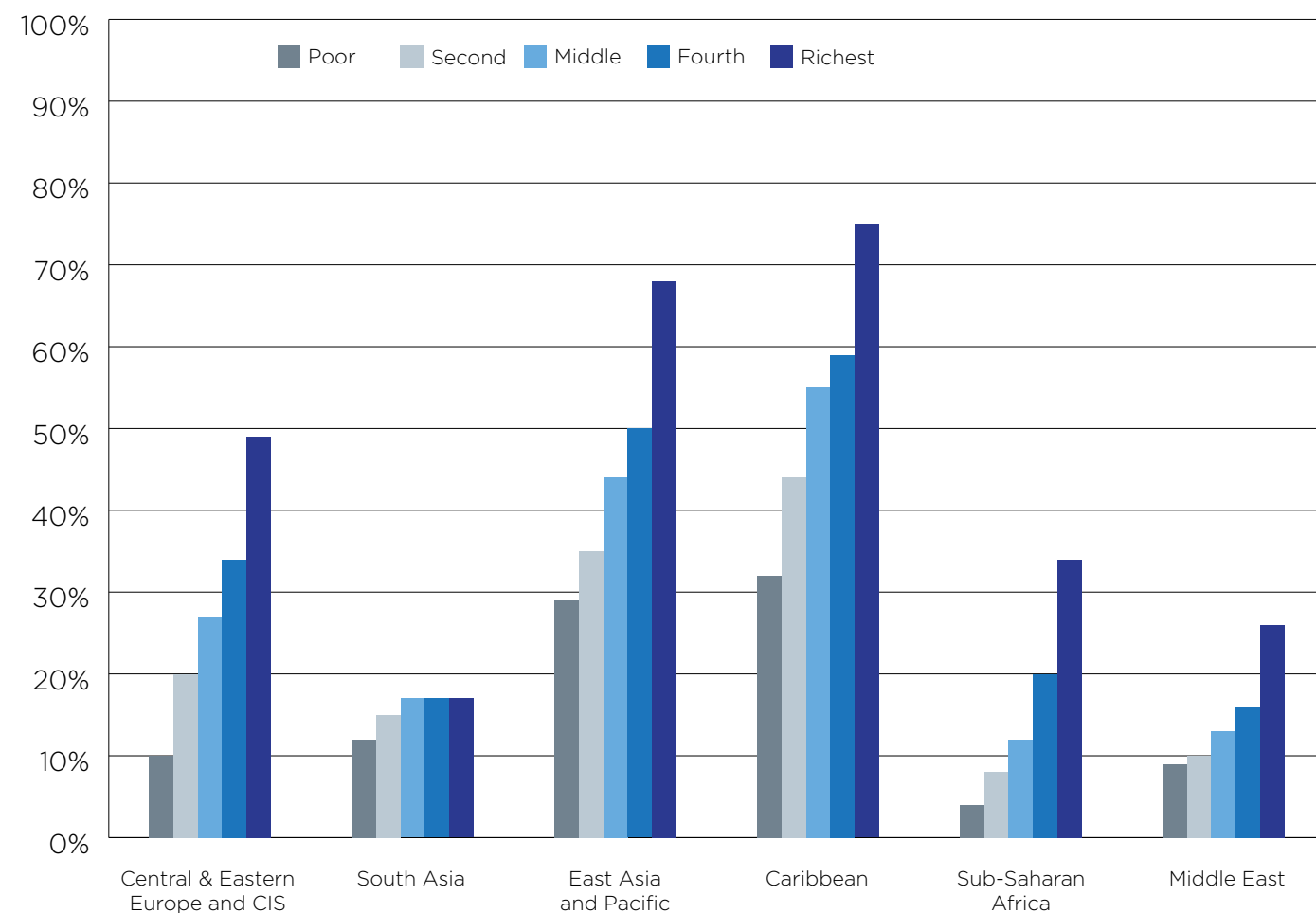


FIGURE 2.

Proportion of young children attending preschool in 58 low-income and middle-income countries by income quintile within country summed across sample countries by region. Data are from the UNICEF's 2005 Multiple Indicator Cluster Survey 3 for children aged 3 and 4 years.

EARLY CHILDHOOD DEVELOPMENT PROGRAMMES

Early Child Development programmes have consistently been shown to be effective in promoting children's development, particularly when they are comprehensive, high quality, and available to the most vulnerable children. However, designing and implementing comprehensive interventions at scale and ensuring that they continue to improve early child development is challenging.

Parenting interventions (usually ages 0-3 years) and preschool programmes (3-6 years) have positive effects on child development. Promoting better parent-child interaction through home visits, community groups, regular clinic visits, or a combination served to improve responsiveness, increase attachment, improve discipline practices, and encourage families to engage in learning, book reading, and play, leading to gains in child development. These approaches have been integrated with nutrition and with health programmes in a number of countries. Results are most effective when there is sufficient focus on the Early Child Development component, and when parents/families have opportunities to practice and receive feedback on interactions with their children from trained childcare workers.

Preschool can also be a critically important point of intervention for vulnerable children. In eight of nine studies reviewed, preschool enrollees demonstrated higher scores on literacy, vocabulary, mathematics, or quantitative reasoning than non-attenders. Formal programmes and longer attendance were often tied to stronger results. A variety of quality improvements of preschools consistently showed positive impacts. Less is known about day care for younger children in low- and middle-income countries, and research in this area is necessary.

PROMISING DIRECTIONS FOR PROGRAMMING

To help alleviate poverty at its source, some countries have tried using cash transfer programmes. Often enacted as conditional cash transfer programmes, countries offer money to mothers dependent on a child's participation in education, health, or nutrition services. The studies generally show positive though small impacts of these programmes on child development, presumably because mothers invest some of their new funds into activities to support their child's development. A trial that adds a parent-child development intervention as a condition for funds is underway.

Educational broadcast programming could be used to promote child development in some low- and middle-income countries where media are widely available, or can be supplied. For example, a study in Bangladesh showed that educational programming aimed at young children improved children's cognitive development, and encouraged families to increase their support for their children's learning.

CHILDREN NOT FULFILLING THEIR POTENTIAL

Children raised in poverty may also be challenged by physical and developmental disabilities, being moderately or severely undernourished, or having HIV/AIDS. In response, WHO has recommended that caregiver and community support – specifically around increasing infant and child stimulation – be incorporated into existing health and nutrition interventions for children at risk. Trainings for parents in clinics, group sessions, and home visits were shown to have positive impacts on development for underweight children, and for children with HIV/AIDS.

PROGRAMMATIC IMPLICATIONS

Countries implementing any of these interventions at scale have been challenged to expand while maintaining quality. Other critical issues involve ensuring that private child care systems are not undermined when public programmes expand, coordinating between departments or sectors, and tracking performance and progress. In some countries, new laws and policies have been useful to encourage ministries to work together. Reaching the last 10 percent may be more expensive than earlier expansions, yet highly at-risk populations are often the most crucial to achieving success in promoting child development, and may show the largest benefit. Finally, incorporating Early Child Development activities into existing health and nutrition programmes might be the best way to reach children younger than 3 years of age.

Education Gap and Pre-primary Enrolment Rate

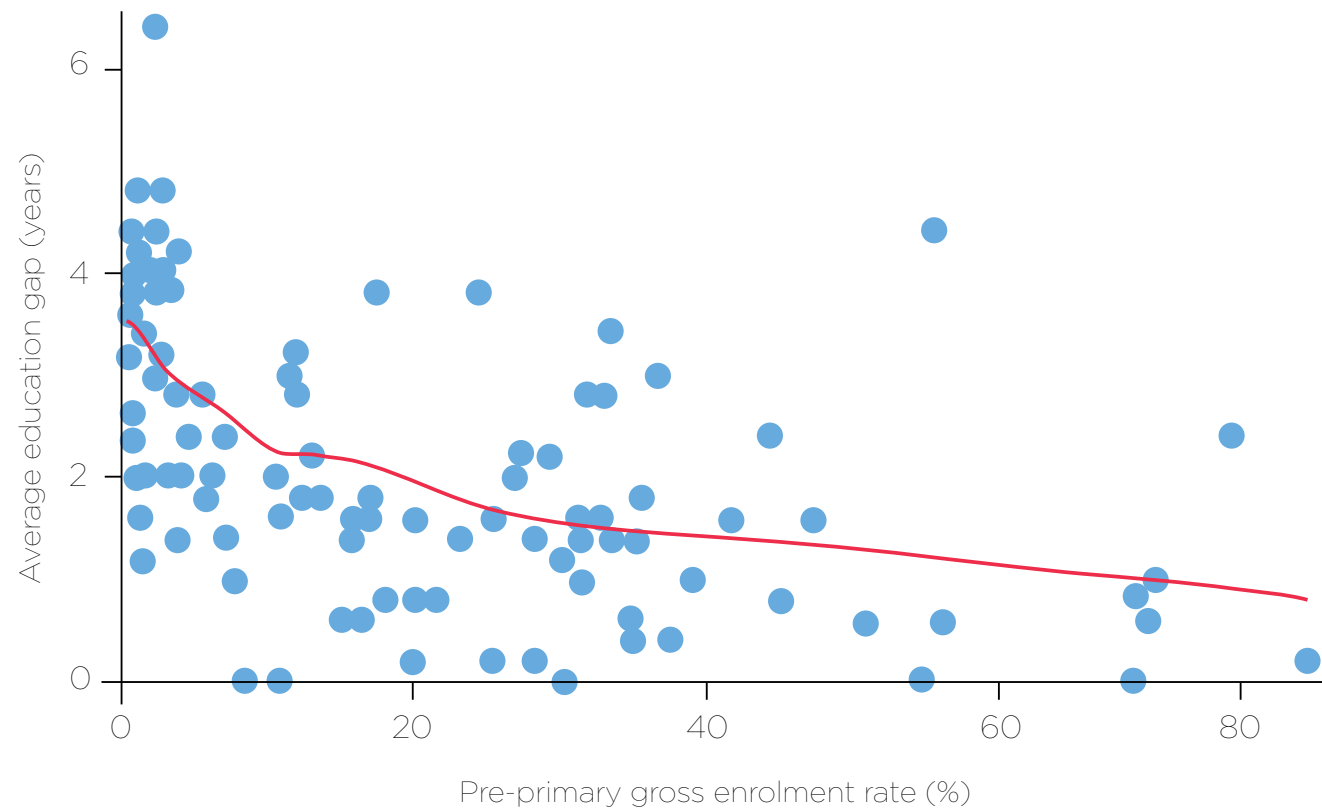


FIGURE 3. Association of preschool enrolment and the schooling gap for 73 low-income and middle-income countries. Schooling gap defined as the gap between schooling attainment of the wealthiest quintile of youth compared with youth in other wealth quintiles. Average education gap is for those aged 15–19 years. Pre-primary gross enrolment rate is from 8–12 years earlier. Bandwidth=0.8.

ESTIMATING POTENTIAL BENEFITS

Data from 73 countries suggest that increasing preschool attendance, one type of Early Child Development programme, in all low and middle income countries would lead to substantial gains in schooling (Figure 3). The subsequent benefits from increased future earnings would range from 11 to 34 billion dollars with a benefit-to-cost ratio ranging from 6.4 to 17.6 depending on the percent of children attending preschool (25% or 50%). These are conservative estimates that do not account for other Early Child Development interventions or for advantages of increasing childhood development, such as reduced crime or improved parenting.

TRENDS IN POLICIES AND FUNDING

Since the 2007 report, more than 40 countries are developing or have developed Early Child Development programmes, and a number of regional and global bodies have issued strong commitments to early child development. However, funding at national levels continues to lag, often threatening success and increasing the risk for the continuing expansion of disparities.

Conclusion



The first paper – “Child Development 1: Inequality in early childhood: risk and protective factors for early childhood development” – demonstrates that potentially remediable biological and psychosocial risks during pregnancy and the early years may be irreversible and have repercussions that last a lifetime. Children who are delayed often grow into adults whose cognitive and psychological functioning suffers and – so does their educational attainment and future income, reinforcing the poverty gap. However, a reduction of risks and the addition of protective factors can give all children – and especially those in greatest economic need or those with disabilities – the ability to reach their potential.

The second paper – “Child Development 2: Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries” – offers strategies to promote adequate stimulation, early learning opportunities, and access to necessary

resources postnatally. Although incentives can be added, these programmes often require buy-in from governments, communities, and families. And while global and regional support is strong, weak national funding commitments often hold back efforts to reach more families and expand programmes that have proven successful on a smaller scale.

The economic impact of investing in high quality, integrated, early childhood programmes is extremely strong, with payoffs that reduce inequalities among children, families, and entire nations. Moreover, reduction in inequalities can extend to the next generation as today’s children become tomorrow’s parents and expose their children to fewer risks, more protective factors, and better opportunities for learning. As UNICEF Executive Director Anthony Lake wrote in a supportive commentary, “Focusing on reaching those children is not only the right thing to do; it is also a highly cost effective investment countries can make in their long-term growth.”