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IMPACT OF HEALTH ON EDUCATION ACCESS AND ACHIEVEMENT

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Access to education is recognized as a basic human right and yet projections based on current trends show that more than 50 countries will not achieve universal primary education by 2015. This briefing paper looks at the role of malnutrition and diseases in the failure of countries to meet EFA targets. It is based on the CREATE Pathways to Access Research Monograph, *The Impact of Health on Education Access and Attainment: A Cross-National Review of the Research Evidence* (Pridmore, 2007).

Introduction

This policy brief draws on recent summaries and meta-analyses of the evidence base, on well-designed individual studies, and on consensual views from the international development agencies. It places particular emphasis on issues of gender, poverty, social exclusion and innovative practices and looks specifically at the long term effects on learning of poor health and nutrition in early childhood and during primary and junior secondary school, as well as the effects of HIV and AIDS. These are linked to the CREATE Zones of Exclusion (see Lewin, 2007). This brief identifies some of the gaps in knowledge and understanding and draws out relevant conclusions for policy and practice.

Summary of research findings

Long-term effects of poor health and nutrition in the pre-school years: Recent research has given significant attention to the links between the long term effects of health and nutrition in early childhood and educational outcomes. The key message from this literature is that an estimated 200 million children under 5 years old fail to reach their potential in cognitive development because of poverty, poor health and nutrition, and deficient care. Most of these children live in South Asia and

sub-Saharan Africa. These disadvantaged children are likely to do poorly in school and subsequently have low incomes, high fertility, and provide poor care for their children leading to the intergenerational transmission of poverty. This loss of human potential has been estimated to lead to a 20% deficit in adult income and to have implications for national development (Grantham-McGregor et al, 2007).

The research evidence points to there being four key risk factors where the need for intervention is urgent: stunting, inadequate cognitive stimulation, iodine deficiency, and iron deficiency anaemia. The evidence is also considered to be sufficient to warrant interventions for malaria, intrauterine growth restriction, maternal depression, exposure to violence, and exposure to heavy metals. These challenges can lead to children being excluded from education in Zones 0 and 1 of the CREATE Access Model (see box below) or to them enrolling late.

There are many affordable and pro-poor strategies to improve cognitive development including increased cognitive stimulation, deworming, improving hygiene, water and sanitation and access to insecticide treated bed nets as well as supplementation of vitamin A (in the neonatal period and late infancy), preventive zinc

supplements, iron supplements for children in areas where malaria is not endemic, and universal promotion of iodised salt. To eliminate stunting in the longer term, it has been suggested that these interventions should be supplemented by improvements in the underlying determinants of undernutrition, such as poverty, poor education, disease burden, and lack of women's empowerment.

A conceptual framework for linking health shocks in the pre-schools years to reduced learning and low-cost interventions in the pre-school years is provided in figure 1.

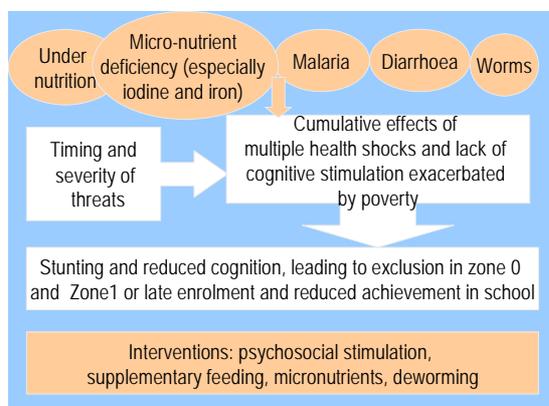


Figure 1 Conceptual framework linking health shocks to learning and interventions in the pre-school years

Effects of poor health and nutrition in primary and secondary school years: The magnitude of health shocks faced by school-aged children is also staggering. A quarter of all children eligible to be in school are malnourished and in developing countries frequently carry an additional burden of infectious diseases. It is estimated that 60 million school-age children suffer from iodine deficiency disorders, 85 million are at risk for acute respiratory disease and other infections because they are deficient in vitamin A and 210 million suffer from iron deficiency anaemia (Jamieson et al, 1993). Parasitic worms are a major source of malnutrition with an estimated 880 million school-age children infected (Partnership for Child Development, 1997). Malnourished children become even more malnourished when they are infected with worms, which interfere with nutrient uptake and are a major cause of anaemia. An estimated fifteen million children have already been orphaned by AIDS, and millions more children live in families affected by HIV and are at risk of being both pushed and pulled out of education.

But what is the impact of this burden of malnutrition and diseases on access to education and attainment in Zones 2 and 3 of the CREATE Access Model? Recent studies have found sizeable and statistically significant impacts of school child health and nutrition on educational outcomes. Further, analyses show that there is strong evidence to suggest that school-aged children who suffer from protein-energy malnutrition, hunger, or who lack certain micronutrients in their diet (particularly iron, iodine or vitamin A) or who carry a burden of diseases such as malaria, diarrhoea or worms do not have the same potential for learning as healthy and well-nourished children, and that they are more likely to repeat grades, drop out early and fail to learn adequately due to poor attention, low motivation and poor cognitive function. Recent macroeconomic estimates suggest that the impact of anaemia alone, through both physical and cognitive channels, could be to suppress GDP by as much as 4% on average in less developed countries and that through its impact on school participation and learning, anaemia could be central to understanding the intergenerational transmission of poverty (Horton & Ross, 2003).



What is educational access?

Meaningful access: requires high attendance rates, progression through grades with little or no repetition, and learning outcomes that confirm that basic skills are being mastered.

Zones of exclusion: educational access is described in terms of 6 zones of exclusion:

Zone 1 children include those who have never attended school.

Zone 2 consists of children who have dropped out before completing the primary grades.

Zone 3 relates to children enrolled at primary level at risk of exclusion and non-completion.

Zone 4 focuses on children below the age of 15 who fail to make the transition into lower secondary schooling or its alternatives.

Zone 5 contains those children who drop out of secondary grades and fail to complete the cycle.

Zone 6 includes those at risk in secondary schooling who attend irregularly, fail to learn at appropriate levels and who are at risk of drop out.

Zone 0 includes children with no access to pre-school.

In the face of these challenges, recent work argues convincingly that socially progressive, school-based health and nutrition programmes specifically targeted towards the poor, girls, and the most disadvantaged children can provide a cost effective and low-cost solution to loss of education and learning. The need for school health and nutrition programmes as part of Education for All (EFA) actions is now recognised both by countries and development partners worldwide. The framework to 'Focus Resources on Effective School Health' (FRESH) developed jointly by UNESCO, WHO, UNICEF, Education International and the World Bank and launched at the World Education Forum in Dakar in 2000, carried the clear message that good school health, especially water, sanitation and nutrition, is a key component of efforts to achieve EFA.

The relatively recent innovation, Food for Education Programmes, are also currently viewed as having high potential to increase attendance and the quality of education if carefully tailored to the context.

A conceptual framework for linking health shocks to learning and low-cost interventions in the primary and secondary school years is provided in figure 2.

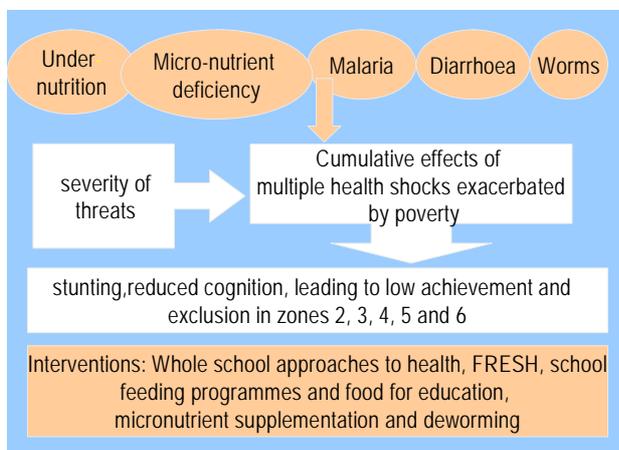


Figure 2 Conceptual framework linking health shocks to learning and interventions in the primary and secondary school years

HIV and AIDS: A key finding of a cross-national review of the research evidence on the impact of HIV and AIDS on schooling in sub-Saharan Africa is that many impoverished households are reaching the limits of their capacity to cope, leading to many affected children, especially maternal orphans, missing out on education across all four zones of the CREATE Access Model (Pridmore, 2008). It is ironic that children should be both pushed and

pulled out of school at a time when education is being viewed as a 'social vaccine' and the very thing vulnerable young people need to help protect themselves from HIV infection.

Schools are also increasingly challenged to meet the educational and emotional needs of the children who walk through their door and may need to do more to reach out to the young people who cannot attend regularly and are affected by poor health. This implies that educational reform is needed to move away from the 'one size fits all' view of schooling and encourage education planners and practitioners to think creatively, 'out of the box', about alternative, more flexible forms of educational delivery. At the same time there is a need for the community to build 'circles of support' around vulnerable children and child protection legislation and child rights to be strengthened.

A conceptual framework for linking HIV and AIDS to learning and interventions is given in figure 3.

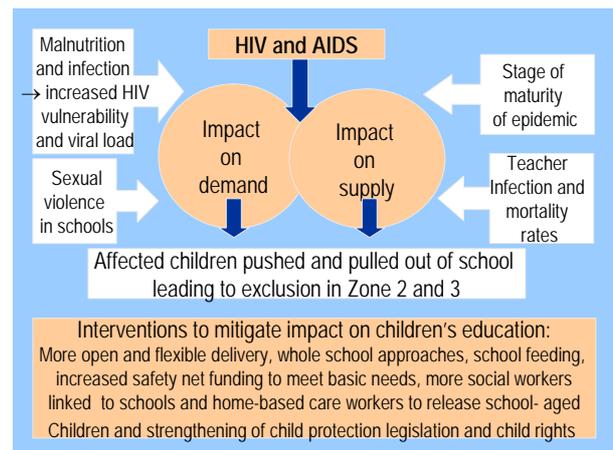


Figure 3 Conceptual framework linking HIV and AIDS to learning and interventions

The remaining gaps in knowledge and understanding

The gaps in the knowledge base fall into three main categories: (i) evidence from randomised controlled clinical treatment trials (RCTs) to further strengthen and establish the evidence base for a causal relationship between poor health and nutrition and poor educational access and attainment, (ii) lack of knowledge in specific contexts of what school-based policies are in place at all levels and are being implemented to support the learning of children made vulnerable by poor health/nutrition, (iii) lack of knowledge in different cultural contexts of intra-household decision making processes and values related to the education of children made

vulnerable by poor health/nutrition that can lead to discrimination and exclusion.

Whilst calls for more RCTs are beyond the scope of the CREATE work programme, there is scope for household surveys and case studies to address the following questions:

- What, if any, national and local policies and programmes are in place to support educational access and achievement of children made vulnerable by malnutrition and diseases and deficient care?
- What, if any, policies and programmes are being implemented in schools in disadvantaged areas to monitor and support the health and nutrition of vulnerable children and sustain their access and achievement?
- What further policy development is needed to put low cost, effective interventions in place where needed?

Conclusions

Given the drive to reach the Millennium Development Goals (MDGs) and the EFA targets it is surprising that so little attention is paid in education sector planning to the fact that millions of children in developing countries are missing out on education, or are being silently excluded, because of malnutrition and diseases that do not similarly impact on children in more developed countries. Consequently, there is a need to ensure that policy makers and planners are better informed about the effect that poor health and nutrition is having on children's access to education and attainment, and about what integrated interventions are most effective and efficient.

There is also a need for further policy development at all levels (i) to support whole school approaches to health, (ii) to enable schools to become more open and flexible in delivery of the curriculum to reach out to children who cannot attend school regularly, and (iii) to strengthen school-community links in order to build 'circles of support' around children made vulnerable by poor health and nutrition of themselves or their families and to combat intra-household discrimination leading to reduced educational access.

Although the environment of poverty is complex, the solutions to some of the problems associated with malnutrition and infectious diseases are rather simple. The kinds of investments that are needed to improve nutritional status, and reduce the disease

burden are known and these should increase sustained educational access and attainment. There are a wide range of effective interventions that can and should be made. Many will have more impact if made earlier rather than later. These can help prevent the loss of potential in affected children. Both economically and in terms of equity and individual well-being, there can be no justification for policy makers and development agencies to commit to reductions in unnecessary human suffering through inactivity or failure to allocate resources. Where neglect stems from ignorance of known health and nutrition related causal chains, and is reinforced by poorly informed social practices, the need is to make greater use of education systems to project and support basic messages to those who stand to benefit most.

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This policy brief is based on:

Pridmore, P. (2007) *The Impact of Health on Education Access and Attainment: A Cross-National Review of the Research Evidence* CREATE Pathways to Access Research Monograph No 2. Available at www.create-rpc.org.

It has been developed by the author and the CREATE team.