

# Diet and development beyond 1000 days: ensuring children thrive as well as survive

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Malnutrition is a major global public health problem.<sup>1</sup> The 2021 Global Nutrition Report warns that:

We are off track to meet five out of six global maternal, infant and young children nutrition targets, on stunting, wasting, low birth weight, anaemia and childhood overweight... unacceptable levels of malnutrition persist. Worldwide, 149.2 million children under 5 years of age are stunted, 45.4 million are wasted and 38.9 million are overweight.<sup>2</sup>

The risks of malnutrition are magnified by COVID-19-related health system, social and economic disruptions. The climate crisis even further escalates the risks. Exemplifying the perilous current situation, recent drought—the worst in 40 years—is threatening hunger across the Horn of Africa. In February 2022, the World Food Programme estimated that some 13 million people are in need of support. How the world responds to such present and future nutrition-related crises really matters. Helping child health and nutrition professionals think through how best to do that makes the paper from Bliznashka and colleagues<sup>3</sup> on ‘Diet and development among children 36–59 months in low-income countries’ particularly timely and important. It neatly highlights three too-often neglected issues.

First, the authors’ main outcome, child development, is a critical reminder that improving nutrition is not just about ensuring children survive. They must also be supported to thrive. Malnutrition does indeed underlie almost half of all deaths in children aged under 5 years worldwide and work still needs to be done to reduce these deaths. Less well recognised are the many other adverse impacts on survivors’ health. These include long-term risks of adult non-communicable diseases.<sup>4</sup> Child development is also heavily impacted. A striking observation in the study is how many children were not on track with key developmental milestones: ‘24% off-track in cognitive development, 32% in socio-emotional; 87% in literacy-numeracy’. The authors diplomatically label this ‘suboptimal development’. An alternative description of the same data is that each child who is

not supported to achieve their full potential in life represents a tragic loss: to their families, to their communities, to their countries and ultimately to global society. Nutrition has the potential to change this and impacts across numerous Sustainable Development Goals, including health and well-being, quality education, economic growth, and reduced inequality. For this reason, it should never be seen as a cost but as an investment. A key statistic from the 2017 Global Nutrition Report is that tackling malnutrition has a very high economic return of \$16 for every \$1 invested.<sup>2</sup>

Second, the paper reminds us that older preschool children also matter and should not be neglected. Due to it being a particularly sensitive period of growth and development, there has—quite rightly—been much global policy and programme focus on the ‘first 1000 days of life’, from conception to 2 years of age. However, there are many reasons why some children may miss out on early-life support. De-novo problems may also arise after this time. It is thus refreshing change to see Bliznashka *et al*<sup>3</sup> not only focusing on but finding the benefits of improved dietary diversity and stimulation in children aged 36–59 months. This takes nothing away from the more vulnerable younger children, but should trigger policy makers, programmers and funders to consider a life-course approach and ensure service provision across all age groups. Preschool is especially noteworthy since most children are still in a family environment, and families must be well supported to ensure that children are in turn well supported, well nourished and healthy.

Third, it is commendable that the paper looks at dietary diversity and psychosocial stimulation. Both are modifiable factors, yet they are often overlooked in nutrition programming. It is not of course automatic that the associations seen in a cross-sectional study such as this will translate to effective interventions. The associations are however biologically plausible and hence worth exploring in future work, even if in this study the independent association between diet and development only seemed to hold for literacy-numeracy development. The authors rightly note that holistic care is needed and that single, simple, ‘magic bullet’ interventions are unlikely to have major effects. The challenges here are that neither

dietary diversity nor stimulation can be easily packaged and rolled out; both require much more profound systems changes to deliver. Yet solutions must be found and this paper will help stimulate thinking and planning on this matter. Again, the 2021 Global Nutrition Report complements the paper well, calling out promotion of healthy diets as a priority: to prevent undernutrition but also to prevent overweight/obesity and associated diseases.<sup>2</sup> Healthy diets are also vital to planetary as well as human health.

Also good to note is that this analysis is made possible due to the excellent resource that is Demographic and Health Survey (DHS) data.<sup>5</sup> DHS deserves to be much more widely known and used. Surveys collect a wealth of household and individual variables from some 90 low-income and middle-income countries in a common, standardised way. This makes it possible to look at country-specific differences as well as overall global trends. Such patterns can really help understanding of why changes do (or do not) occur. DHS surveys are also constantly evolving. Although only 15 countries had the required developmental, stimulation and dietary data used for this analysis, more countries will collect these data in the future, so more work on the topic is likely soon. This will enable future analyses to look at possible mechanisms of association. For instance, to what extent does nutritional status as assessed by anthropometry explain the associations observed? What other factors might explain the lack of association between dietary diversity and cognitive, socioemotional and physical development?

In summary, this excellent paper is a reminder of some often sidelined issues that lie ahead and limit current progress in global child health and nutrition. But it also offers valuable ideas and ways forward. It is now up to others—researchers, policy makers, funders and programmers—to make further advances. Even pre-COVID-19 there was much to do in order to achieve the 2030 Sustainable Development Goal targets and the interim 2025 nutrition targets. As we now emerge from the worst of the pandemic there is more than ever to be done. But with will, commitment and resources, progress is possible. Ensuring children survive and thrive is not an optional extra but a must-do global priority.

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