

## Hunger Games

Undernutrition among children has always been a major concern in the Philippines. According to the Philippine 2018-2019 Expanded National Nutrition Survey (ENNS) reported in 2022, the prevalence of underweight among children less than five years old was 18.8% among males and 19.3% among females. It was higher in the rural areas and highest among the poorest wealth quintiles.<sup>1</sup> In terms of magnitude and severity, the prevalence was considered as a medium public health problem.

In line with this, we note an article published in this issue of our journal that looked at the factors affecting survival of children with severe acute malnutrition (SAM).<sup>2</sup> They report that children with SAM have a mortality risk 11.6 times higher than well-nourished children. They also found that the educational attainment of parents, malignancy, and hypovolemic shock were significant predictors of mortality.

Other studies have likewise mentioned the negative effects of undernutrition among children.<sup>3</sup> They also mentioned increased risk for mortality and morbidity, substantial cognitive deficits in school-age children, grade repetition, and a reduced likelihood of employment in formal sectors in adulthood that may result in lower earning potential. Among school children in the Philippines, less diverse diet, food insecurity, residing in urban areas, being older and male, being part of a larger household, and having parents engaged in fishing or farming can be additional determinants.<sup>4,5</sup> Malnutrition among children, including overweight, is also a significant contributor to other diseases that affects them.<sup>6</sup>

In their article, Pabustan-Calleja et al. reported that among the various demographic factors, only the paternal and maternal educational attainment were significantly associated with mortality. Low paternal educational attainment was significantly associated with mortality *21 times* compared to high paternal educational attainment while low maternal educational attainment was significantly associated with mortality *51 times* as compared to those with high maternal educational attainment.<sup>2</sup> These highlight the potential of improving survival outcomes in SAM by improving education.

The relationship between education (or lack thereof) and undernutrition is a reciprocal one. Lack of education can lead to undernutrition directly due to poor food choices among those who may not know better. Indirectly, lack of education can lead to lower socio-economic status (SES) contributing to food insecurity and eventually undernutrition.<sup>7</sup> That our educational system leaves much to be desired is indicated by the latest reports. The Philippines has just recently been ranked 77<sup>th</sup> out of 81 countries in the student assessment conducted by the Organization for Economic Cooperation and Development (OECD) for 15-year-old learners.<sup>8</sup> The relationship between SES and academic performance, however, appear to be a more complex one. For example, in the Programme for International Student Assessment (PISA), students from the Philippines performed significantly lower as compared to students from Turkey and Vietnam belonging to similar socio-economic background.<sup>9</sup>

Conversely, undernutrition can lead to inferior cognitive performance, lower academic achievements, lower employment status and in the longer term, also lead to lower SES.<sup>10,11</sup> Poor economic status has certainly plagued our country as well for the longest time. According to the latest data, the Philippines is ranked 99<sup>th</sup> globally in 2023 in terms of GDP per capita (PPP) and 59<sup>th</sup> in terms of the Gini coefficient (a measure of economic inequality with higher being better).<sup>12</sup>

Addressing undernutrition among children is an urgent public health crisis. Although mortality due to SAM is obviously important, other consequences such as cognitive impairment and subsequent poor SES need to be recognized as these lead to the unending undernutrition. Improving education in our country in all its aspects, and not just on proper nutrition, can just turn out to be the way to sustain a win in the “hunger games”.

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