

Editorial

Malnutrition - a threat to our children in 2022 and beyond??

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Adequate nutrition is essential for children's health and development. Globally it is estimated that undernutrition is responsible, directly or indirectly, for at least 35% of deaths in children less than five years of age. Undernutrition is also a major cause of disability preventing children who survive from reaching their full developmental potential. An estimated 32%, or 186 million, children below five years of age in developing countries are stunted and about 10%, or 55 million, are wasted.¹

In Pakistan, nearly 16-20% of the newborns are of low-birthweight, 17.75% suffer from wasting while 28.9% are underweight. Exclusive breastfeeding has been reported at 48.4% while early initiation at 45.8% with an infant mortality rate of 55.7/1000 livebirths.² Although there has been a decline in malnutrition and mortality among young children over the last decades, but the change is too slow to become noticeable. Unless massive improvements in child nutrition are made, it will be difficult to reduce child mortality. In developing countries, poor perinatal conditions are responsible for approximately 23% of all deaths among children younger than five years old. These deaths are concentrated in the neonatal period (i.e. the first 28 days after birth), and most are attributable to LBW.³

At birth, the neonate leaves the protected intrauterine environment and meets a world full of microbes, most of which are harmless, and some are even protective, but many are potentially dangerous. It is vitally important that this early microbial exposure is managed by the neonate.⁴ Soon after birth, the newborn is colonized by the mother's microbial flora. This microflora is the least threatening, since the mother provides defense against these microbes primarily via breast-feeding, but also to some extent via the transplacental IgG antibodies. The main antibody of the breastmilk is secretory IgA (SIgA). These antibodies protect the breastfed infant's mucosal membranes in the upper respiratory tract and gastrointestinal tract and prevent the harmful microbes from attaching to and penetrating the mucosal epithelium. This makes it important that the neonate is provided with colostrum (early initiation) and exclusive breastfeeding so that the milk SIgA antibodies can protect the young infant against infections.⁵

After 6 months of age, it becomes increasingly difficult for breastfed infants to meet their nutrient needs from human milk alone. The infants are developmentally ready for other foods at about 6 months. This is the period of complementary feeding when children are again at a high risk of undernutrition. It has been reported that the

complementary foods are often of inadequate nutritional quality, or they are given too early or too late, in too small amounts, or not frequently enough. Thus, first two years of life provide a critical window of opportunity for ensuring children's appropriate growth and development through optimal feeding.⁶

Interventions, to promote optimal breastfeeding practices universally, could prevent 13% of deaths occurring in children less than 5 years of age globally, while appropriate complementary feeding practices would result in an additional 6% reduction in under-five mortality⁷. However, malnutrition results, not only from absence of breastfeeding or inadequate complementary feeding but is a consequence of complex interactions between several factors. For example, poor diet and disease results from the underlying causes of food insecurity, inadequate maternal and childcare, and poor health services and environment play an important role. Some of the other causes are social structures and institutions, political systems and ideology, economic distribution of available potential resources. Evidence of the causes and etiology of malnutrition, particularly stunting, has been shown in the prospective study conducted at Lahore from 1984-2002 over 18 years of follow up. Poverty, inadequate sanitation and area of living were some of the factors identified. Maternal Illiteracy was also a major factor identified. The growth faltering could be seen during early months of life in poor areas but it seemed to reduce when early initiation and exclusive breastfeeding was promoted in these areas.⁸ Counselling the mothers with simple messages and improving the skills of primary health care providers have brought a positive response towards improving nutrition of the children, enhancing growth and hence a better health of their children.⁹

Another group of concern is pregnant women, given that a malnourished mother is at high risk of giving birth to a LBW baby who will be prone to growth failure during infancy and early childhood, and be at increased risk of morbidity and early death. In particular, malnourished girls are at risk of becoming yet another malnourished mother, thus contributing to the intergenerational cycle of malnutrition. We cannot ignore the fact that there are young children at risk of ending up malnourished who have underlying diseases like non-infections or congenital diseases which can be life threatening. Early recognition and specific nutrition must be provided for their survival.

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