

Pre and Postnatal Education: Ensuring Healthy Infant Feeding Practices and Preventing Malnutrition

Malnutrition – which includes undernutrition and overnutrition – remains under-recognized and under-treated globally in children under five years old: 149 million of these children are stunted, 45 million are wasted, and 38.9 are overweight or obese.^{1,2} Undernutrition is linked to a mortality rate of 45% in these children.³ Undernourished children experience short-term and long-term consequences: delayed physical development, lowered intellectual quotient development, multiple behavioral problems, deficient social skills, and higher susceptibility to diseases.^{4,5} The reverse is also concerning; infants who gain weight rapidly during early infancy are at risk for childhood obesity and adult metabolic disease.⁶

A child's weight – from birth up to the age of 5 – is largely influenced by their birth weight:⁶ Infants with low birth weight (15–20% of newborns worldwide⁷) are at higher risk of being malnourished later on.⁸ Birth weight is also influenced by maternal characteristics: education, nutrition, breastfeeding duration, use of prenatal services,⁹ postnatal depression, and maternal eating habits.⁶

We must help mothers realize the impact of their own health and nutrition on their infants;¹⁰ the impact of breastfeeding on weight gain;¹¹ and the link between this weight gain and overall infant health. Many mothers introduce milk formula, fluids, and solid foods before six months¹² despite the WHO recommendations (exclusive breastfeeding for 6 months, and continuation for up to 2 years¹³). Maternal self-efficacy in breastfeeding and infant care play a role in the continuation of breastfeeding up to the prescribed period.¹⁴

The prenatal period provides the best opportunity to talk to mothers, assess their needs for informational support, and equip them with the knowledge necessary for promoting breastfeeding and correct infant care. Prenatal education was found to have a significant effect on the nutritional status of infants four months after birth.¹⁵

Postnatal check-ups allow assessment of mothers and infants; these tend to focus on well-baby check-ups and vaccinations. Health workers may miss other problems – specifically those related to breastfeeding – when mothers lack knowledge or the opportunity to bring them up. Health workers must provide enough time and an appropriate venue to explore deficits in the quality of infant care.

We emphasize continuous informational and social support throughout the perinatal period to promote healthy feeding and infant care; these prevent malnutrition and complications in later development.

Floreliz V. Ngaya-an, PhD, RN
Graduate Program Coordinator and Faculty
College of Nursing,
University of the Philippines Manila

REFERENCES

1. Action Against Hunger. World hunger: key facts and statistics [Internet]. 2022.[cited 2022 May]. Available from <https://www.actionagainsthunger.org/world-hunger-facts-statistics>
2. Saunders J, Smith T. Malnutrition: causes and consequences. *Clinical medicine*. 2010; 10(6):624-7. doi.org/10.7861/clinmedicine.10-6-624
3. World Health Organization. Malnutrition. Available from https://www.who.int/health-topics/malnutrition#tab=tab_1.
4. De Sanctis V, Soliman A, Alaaraj N, Ahmed S, Alyafei F, Hamed N. Early and long-term consequences of nutritional stunting: from childhood to adulthood. *Acta bio-medica: atenei parmensis*. 2021; 92(1):e2021168. doi.org/10.23750/abm.v92i1.11346
5. Kandala N, Madungu TP, Emina JB, Nzita KP, Cappuccio FP. Malnutrition among children under the age of five in the Democratic Republic of Congo (DRC): does geographic location matter? *BMC Public Health*. 2011; 11(1):261-0. doi:10.1186/1471-2458-11-261
6. Yilgwan CS, Utoo TB, Hyacinth HI. Maternal characteristics influencing birth weight and infant weight gain in the first 6 weeks post-partum: A cross-sectional study of a post-natal clinic population. *Nigerian medical journal: journal of the Nigeria Medical Association*. 2012; 53(4):200-5. doi.org/10.4103/0300-1652.107553
7. Rahman MS, Howlader T, Masud MS, & Rahman ML. Association of low-birth weight with malnutrition in children under five years in Bangladesh: do mother's education, socio-economic status, and birth interval matter? *PloS One*. 2016; 11(6):e0157814. doi.org/10.1371/journal.pone.0157814
8. World Health Organization. Global nutrition targets 2025: low birth weight policy brief [Internet]. 2014. [cited 2022 May]. Available from <https://www.who.int/publications/i/item/WHO-NMH-NHD-14.5>
9. Yelverton CA, Geraghty AA, O'Brien EC, Killeen SL, Horan, MK, Donnelly JM, et al. Breastfeeding and maternal eating behaviours are associated with child eating behaviours: findings from the ROLO Kids Study. *Eur J Clin Nutr*. 2020. doi:10.1038/s41430-020-00764-7
10. Zhang P, Wu J, Xun N. Role of maternal nutrition in the health outcomes of mothers and their children: a retrospective analysis. *Medical science monitor: international medical journal of experimental and clinical research*. 2019; 25: 4430-7. <https://doi.org/10.12659/MSM.914679>
11. Mihrshahi S, Battistutta D, Magarey A, Daniels LA. Determinants of rapid weight gain during infancy: baseline results from the NOURISH randomised controlled trial. *BMC Pediatrics*. 2011; 11:99. <https://doi.org/10.1186/1471-2431-11-99>
12. Tamiru D, Belachew T, Loha E, Mohammed S. Sub-optimal breastfeeding of infants during the first six months and associated factors in rural communities of Jimma Arjo Woreda, Southwest Ethiopia. *BMC Public Health*. 2012; 12(1). doi:10.1186/1471-2458-12-363
13. World Health Organization. Exclusive breastfeeding for six months best for babies everywhere. 2011. Available from <https://www.who.int/news/item/15-01-2011-exclusive-breastfeeding-for-six-months-best-for-babies-everywhere>.
14. Gonzales AM. Breastfeeding self-efficacy of early postpartum mothers in an urban municipality in the Philippines. *Asian/Pacific Island Nursing Journal*. 2020; 4(4):135-43. doi.org/10.31372/20190404.1023
15. Ortiz-Félix RE, Cárdenas-Villarreal VM, Miranda-Félix PE, & Guevara-Valtier MC. Impact of a prenatal education intervention in pregnant women to prevent overweight in infants. Impacto de una intervención de educación prenatal en mujeres embarazadas para prevenir el sobrepeso en lactantes. *Gaceta medica de Mexico*. 2021; 157(1):3-9. <https://doi.org/10.24875/GMM.M21000529>