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Multi-micronutrient interventions and possible health benefits in adolescent females living in the developing countries

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Micronutrient deficiencies are known to affect more than 2 billion people globally. The magnitude of the problem is much greater in low income countries where multiple micronutrient deficiencies often occur concurrently as a result of poor-quality diets. This presentation will provide a brief overview of the extent of micronutrient deficiencies in adolescent females in developing countries. It will then examine the effect of multiple micronutrient interventions on various nutrition and health outcomes in this population. Iron deficiency and iron deficiency anaemia are highly prevalent among adolescent females. Vitamin A and iodine deficiency are also widespread. While data on other micronutrient deficiencies are limited, deficiencies of the B vitamins (folic acid, vitamin B-12, vitamin B-6, riboflavin, and niacin), vitamin C, and zinc are often found to be coexisting with the above 3 major problem micronutrients. Compared with iron and folic acid supplements, multiple micronutrient supplements were found to improve micronutrient status significantly, while only a marginal improvement in haemoglobin response was observed in children and adolescents. In children, aged 5-18 years, providing multiple micronutrients as supplements or as fortified food resulted in a small but significant improvement in linear growth, and in some domains of cognitive performance, but the effect on morbidity outcomes were equivocal. However, studies of micronutrient interventions on various health outcomes in adolescent females are limited. More studies are needed to clarify whether a multiple micronutrient intervention, as a public health programmatic approach, should be recommended for adolescent females in populations where concurrent micronutrient deficiencies exist.

Biography

Faruk Ahmed earned his Ph.D. at Southampton University in Southampton, UK. He has been working for more than 20 years in the area of public health nutrition in both developed and developing countries including Middle East. His specific research interests include micronutrient deficiencies with a particular focus on iron deficiency anaemia, and the impact of interaction between micronutrients on nutritional status and health outcomes in children and adolescents. He has published more than 50 papers in peer reviewed journals and serving as an editorial board member for Public Health Nutrition journal.