Addressing Micronutrient Deficiencies to Reduce Cancer Risk in Kenya: Challenges and Strategies for Prevention

[1]*Beatrice Nyanchama Kiage-Mokua,*

[1]Department of Human Nutrition Sciences, School of Food and Nutritional Sciences, Jomo Kenyatta University of Agriculture & Technology, Nairobi, Kenya.

[1]Corresponding Author Email: **eileennyanchy@gmail.com**

Abstract

Micronutrient deficiencies are a significant public health issue in developing countries, including Kenya, contributing to malnutrition and increased risk of various chronic diseases including cancers. This review examines the impact of micronutrient deficiencies on cancer risk in Kenya and evaluates effective prevention and intervention strategies. Through an extensive search of electronic databases for studies published between 2010 and 2023, multiple micronutrient deficiencies, such as vitamins A, C, D, and E, as well as zinc and selenium, were found to be prevalent in the Kenyan population. According to the KNMS 2011, 83.3% of preschool children are zinc deficient. Iron deficiency is at 36.1% in pregnant women and 21.8% in under 5 children. The national prevalence of vitamin A deficiency (VAD) is 4.1% with the margin at risk for under 5 children being at 52.6%. National folate deficiency is at 32.1% in pregnant women and 30.9% in nonpregnant women, while 22.1% of school-age children are iodine deficient. These deficiencies are associated with heightened susceptibility to cancers, including breast, cervical, colorectal, and prostate cancer. The International Agency for Research in Cancer (IARC) GLOBOCAN report for 2018 estimated 47,887 new cases of cancer annually with a mortality of 32,987. This represents close to 45% increase in incidence compared to the previous report that estimated 37,000 new cancer cases annually with an annual mortality 28,500 in 2012. Factors contributing to the high prevalence rates of micronutrient deficiencies include inadequate dietary intake, limited access to nutritious foods, insufficient healthcare infrastructure, socioeconomic disparities, and cultural practices. Addressing these deficiencies is crucial, given the rising cancer burden in the country. Prevention and intervention strategies include promoting diverse and balanced diets through agricultural initiatives, fortifying staple foods with essential micronutrients, and implementing supplementation programs targeting high-risk populations. Additionally, community education and awareness campaigns are essential to improve dietary habits and reduce cancer risk. Findings emphasize the necessity of multi-sectoral collaboration among government agencies, healthcare professionals, and non-governmental organizations to tackle the root causes of micronutrient deficiencies and implement targeted interventions. Effective prevention and intervention strategies are vital for reducing cancer risk and improving public health outcomes in Kenya.

Keywords: Micronutrient Deficiencies, Cancer Risk, Prevention Strategies, Kenya, Public Health Interventions