

Commentary

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Promoting behavioural interventions to control non-communicable diseases among children in resource-constrained settings

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The increasing burden of non-communicable diseases (NCDs) among children in resource-constrained settings offers opportunities for implementing behavioural interventions across the entire life course [1,2,3]. Sustainable Development Goal 3 promotes good health and well-being for all ages, and endeavours to reduce mortality due to non-communicable diseases through prevention and treatment [4,1]. Globally, the distribution and nature of non-communicable diseases are shaped by exposure to behavioural, social, and environmental factors [5,6]. This drives the argument that social conditions experienced during early life have long-lasting effects that contribute to NCDs [5,7]. Social and societal drivers of NCDs often referred to as the “causes of the causes” [5,8], are profound in low-income and middle-income countries (LMICs), which bear 82% of NCD deaths [9,1].

The life-course approach, which is all-inclusive, considers the needs of various age groups (i.e. preconception and prenatal care, infancy, childhood, adolescence, adulthood and ageing) considering NCD preventive and control strategies [6,5]. Evidence suggests that NCD risk factors operate through individual, family, and social structures to manifest across a person’s lifetime [6,5]. Whilst, risky behaviours are formed early in life, they may heighten throughout adult years with increasing exposure to NCDs. Therefore, interventions supporting an individual’s optimal growth and development whilst consciously addressing NCD risk factors must be promoted [2]. Developing interventions at an early age is crucial because children not

only continue to develop lifestyle habits (e.g., physical activity and eating behaviours) but are also influenced by the social and physical environments they reside in. Therefore, early nurturing care interventions targeting preconception, pregnancy, childbirth, and early childhood have substantial positive effects on child survival, reduced morbidity, and improved linear growth and developmental trajectories [2].

Contextualizing NCDs among children

Childhood obesity has been identified as a strong predictor of adult obesity, with a heightened risk of early onset of type 2 diabetes and mental health conditions [10]. Unfortunately, it is predicted that globally, the number of children aged < 5 years who are underweight would increase to 43 million by 2025 [10]. Despite the increasing burden of childhood obesity, in their review, Danquah and colleagues (2020) demonstrate a paucity of primary research on this topic across sub-Saharan African countries [11]. Therefore, they call for more primary research which can inform policies, decisions and implementation to halt the worrying trend in Africa. In this edition, Afaa and colleagues determine the prevalence of overweight, obesity, and associated hypertension among healthy school children aged 5 – 14 years from six schools in Greater Accra, Ghana [12]. Weight, height and blood pressure were measured and body mass index was generated and plotted. They found hypertension to be common among the school children studied, which was significantly associated with overweight and obesity. This calls for the promotion of healthy behaviour interventions, including proper feeding practices during early childhood years. Early life nutrition largely determines a person’s risk of developing chronic

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non-communicable diseases [1]. Therefore, proper feeding practices which ensure healthier weight into adulthood are encouraged [13]. In this regard, research suggests that adopting recommended breastfeeding practices could mitigate the onset of obesity among children, with a reduced risk of having the same condition in later life [14,15]. The World Health Organization recommends that babies be exclusively breastfed for their first 6 months of life, and then introduced to first (or complementary) foods, which gradually replace breastmilk between the ages of 6 and 23 months. However, sub-optimal feeding practices persist.

In 2019, UNICEF reported that at least one in three children was not getting the nutrition they need to grow well, particularly in the crucial first 1,000 days, from conception to the child's second birthday, and often beyond. Also, only 2 in 5 infants under six months of age are exclusively breastfed, as recommended. Some studies attribute this situation to context-specific social and cultural taboos against breastfeeding, the struggle many women face to balance work with childcare, and the lack of breastfeeding support [10,16]. In this edition, Moro and colleagues explore indigenous breastfeeding beliefs and practices among lactating mothers with babies less than six months of age in rural Northern Ghana. They report conflicts between some indigenous breastfeeding practices within the Builsa North district on one hand and recommended WHO practices. Thus women are unable to ignore prevailing indigenous breastfeeding practices due to compelling influences. In furtherance to that, Moro suggests innovative and culturally acceptable methods to promote breastfeeding within such communities, which would improve the nutritional intake of children [17].

While healthy nutrition may reduce the onset of obesity at an early age, wasting (i.e., a form of undernutrition) complicates a child's survival, especially from childhood cancers. Wasting often reflects a loss of weight arising from severely poor nutrient intake, illness, or both. Globally, wasting threatens the lives of 7.3 per cent of children < 5 years old, which affects how they grow, develop and survive. In low-to-middle-income countries, between 80,000 and 100,000 children die yearly from cancer, where low survival rates are associated with co-existing malnutrition [18]. This calls for the promotion of nutritional support for children diagnosed with cancer for they to attain appropriate growth and neurodevelopment. Salifu et al. argue that, although most childhood cancers are curable, comorbid malnutrition delays treatment initiation, increases treatment toxicity, and often leads to poor clinical outcomes. Thus, they studied nutritional status at diagnosis of childhood cancer at the Paediatric Oncology Unit in Korle Bu Teaching Hospital, Accra, Ghana. Salifu assessed the prevalence of malnutrition at the diagnosis of childhood cancer, compared weight-based measurements with arm anthropometry in the assessment of acute malnutrition (wasting) and determined the association between malnutrition and selected cancer characteristics. They

report that mid-upper arm circumference and upper arm muscle area detected more children with wasting than weight-for-height z-score and body mass index-for-age z-score at cancer diagnosis. Also, advanced-stage disease and lymphoma were associated with wasting. They recommend the establishment of a nutritional rehabilitation programme at the health facility to ensure early and appropriate nutritional interventions that can correct or prevent further nutritional deficits in children diagnosed with cancer [18].

Conclusion

Children with non-communicable diseases face diverse challenges, not only in achieving developmental milestones but in coping with poor physical health. As the incidence of NCDs rises, the imperative to act on risk factors becomes more urgent. The diversity of findings reported in this edition and elsewhere offers opportunities for designing innovative and culturally appropriate behavioural interventions, which promote healthy behaviours, especially during childhood. Adopting a life-course strategy, with focused maternal and child health interventions, can therefore avert noncommunicable diseases with global health and socioeconomic benefits. Programmes across the reproductive health life-cycle are strongly positioned to play an important role in NCD prevention given early life influences on NCD risks and outcomes. This emphasizes the need for targeting women of reproductive age to adopt healthy preconception lifestyles, and thus confer these benefits to their children [1]. Also, school-based health promotion and health education interventions should broaden their scope to include children whose related behaviours set up lifetime patterns of risk.

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