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Barriers to Managing Childhood Obesity in the General Practice Amidst of the Double Burden of Malnutrition: A Sri Lankan Perspective

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Abstract

Childhood obesity is on the rise, mostly in the low-income regions in South Asia including Sri Lanka. Simultaneously, undernutrition also continues to be an ongoing public health issue. The coexistence of childhood obesity with undernutrition has resulted in a double burden of malnutrition in these countries.

Management of obesity in a community already affected by undernutrition is a challenging situation. At present, management of childhood obesity occurs as a hospital-based lifestyle modification intervention which cannot address all tiers in the community alike. Although national level multifaceted strategies are in place, implementation is limited due to financial constraints. In this context, the general practitioners can be considered as an important group of medical professionals who can reach families in the community.

In many households in Sri Lanka, an overweight child is considered as normal and well-nourished in comparison to an underweight child. Unhealthy eating habits and force feeding have become norms in the society. Changing mindsets of people need significant time and commitment. General practitioners, in the community would be able to achieve this target through effective communication based on a nutrition sensitive approach.

While uplifting the infrastructure facilities, steps have to be taken to update the knowledge and communication skills of the general practitioners on managing childhood obesity in a community affected with double burden of malnutrition. The well-equipped GP is an asset to modify the attitudes and thinking patterns of parents with regard to child nutritional problems.

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Global Burden of Childhood Obesity

The rising prevalence of obesity in children and adults is a global health concern. Obesity has been determined as a key factor in the aetiology of several non-communicable diseases (NCD) including cardiovascular disease, type 2 diabetes, non-alcoholic steatohepatitis and several types of cancer [1]. The persistence of childhood obesity with its associated metabolic derangements into adulthood is widely evident [2]. Childhood obesity also induces a significant personal, societal and economic burden at local and global level [3].

During the past four decades, the worldwide prevalence of childhood obesity has plummeted by nearly eight-folds among children and adolescents and it is anticipated to escalate further throughout the world. While the increasing trend in body mass index (BMI) have plateaued in most of the high-income countries, obesity prevalence continues to escalate in the low and low-middle income countries particularly in East and South Asia [4].

The world-wide prevalence of childhood obesity in 2016 was 7.8% in boys and 5.6% in girls [4, 5]. The key findings of the UNICEF- WHO- World Bank joint child malnutrition inter- agency group updates for the year 2021 indicate that globally, 149 million children under 5 years of age were stunted, 45 million were wasted and 39 million were overweight. The report also states that, in terms of country-level targets, a commendable progress is being made towards eliminating stunting. In contrast, for overweight, about half of all countries have experienced no progress or have shown worsening trends [6]. A recent Sri Lankan survey done in its capital city shown a prevalence of childhood obesity at 10.3% and overweight at 11.3% [7]. Another regional study that included a sub-urban population, found a prevalence of 7.81% overweight and 6.79% obesity among a group of school children [8].

Burden of Undernutrition

While addressing obesity has been given priority on a global scale, many countries in South Asia are still grappling with high rates of stunting, wasting, and micronutrient deficiencies among children. More than half of the under 5 child population with undernutrition in the world live in South and South East Asia. Consequences of undernutrition are both short-term and long-term. Despite recent progress, undernutrition remains yet a pressing concern in many low-income regions of South Asian countries.

The study conducted by Naotunna et al in a rural region of Sri Lanka in 2017, revealed a survey design adjusted prevalence of underweight and stunting at, 25.93% (95% CI 24.07– 27.89%) and 43.92%(95% CI 40.55–47.56%) respectively[9]. Factors contributing to undernutrition in these areas include poverty, limited access to healthcare, inadequate sanitation, and suboptimal breastfeeding practices.

The increasing prevalence of overweight and obesity with simultaneous existence of undernutrition (thinness and stunting) represents an additional health burden for Asian countries, particularly in their low income and nutrition deficit regions [10].

Double Burden of Malnutrition

The double burden of malnutrition refers to the coexistence of undernutrition (e.g., stunting, wasting) and overnutrition (e.g., obesity) in the same population, household, or individual. This complex public health challenge can lead to a major health and economic burden to a country.

Hossain et al reported, based on their analysis of Demographic and Health Surveys conducted in Bangladesh, India, Pakistan, Maldives and Nepal, which were conducted between 2009 and 2016, that the prevalence of underweight was 37% in Bangladesh, 19% in Maldives, 38% in India, 29% in Nepal and 28% in Pakistan. Nepal, Bangladesh and India had similar overweight prevalence (between 2% and 4%) while Pakistan (7%) and Maldives (9%) had higher prevalence [11]. According to Hossain et al, households with a higher wealth index or education have shown lower odds of having underweight children.

A recent Sri Lankan survey reported that the percentages of thinness and overweight (including obese) among children were 19.3% and 13.4%, respectively, while the percentages of thinness and overweight (including obesity) in mothers were 5.0% and 36.5%, respectively [12].

This phenomenon is often observed in low- and middle-income countries experiencing rapid urbanization and undergoing nutrition transitions. Causes of the double burden of malnutrition are multifaceted. Rapid urbanization accompanied by associated lifestyle changes is one of the primary causes. Excessive consumption of ultra-processed food, lack of access to nutritious foods, limited awareness about the importance of balanced nutrition, particularly among the disadvantaged populations are strong contributory factors for the nutrition transition.

The inadequacy of healthcare infrastructure to effectively address both undernutrition and obesity within a population marked by socioeconomic disparities and inequalities remain an unresolved issue in many South Asian countries, including Sri Lanka.

The Sri Lankan government has already embarked on a multidimensional strategic approach towards eliminating the double-burden of malnutrition involving both the curative and the preventive health care sectors [13]. However, reaching all tiers of the community equally and effectively is a significant challenge. It is crucial that the health care teams in the community play a proactive role in this process and hence be equipped with adequate knowledge and skill to meet the requirement.

Managing an Obese Child in the General Practice

General practitioners are an important group of medical professionals to reach families in the community. However, the general practitioner may find it a challenging task to manage a child with obesity in a community where undernutrition coexists, particularly when it occurs within the same family. In many households in Sri Lanka, parents consider that an overweight child is quite normal, well-nourished and healthy when compared to the underweight child. It is a difficult task to convince the parents and care givers that being overweight is not normal and that excess body fat is unhealthy.

An adolescent with obesity would pose a different type of a challenge to the general practitioner. Adolescents make up to about 18% of the world population and more than half of them live in Asia [14].

Since adolescents are typically considered a “healthy” group, less attention has been paid to adolescent health. The adolescent health programmes in South Asian regions traditionally focus on reproductive and sexual health issues rather than the maintenance of a healthy BMI. Hence, adolescent obesity is often neglected, and not well addressed.

At instances where the same family has kids at both ends of the spectrum of malnutrition, parents may be overwhelmed with different health advice given to treat their children.

Even if the caregivers are convinced about the adverse consequences of high BMI during childhood and beyond, implementation of lifestyle modifications would also be a challenge to the general practitioner.

At present, the management of childhood overweight and obesity is a clinic-based lifestyle modification intervention that include dietary, physical activity and behavioural modifications. Family involvement in the management of an obese child is essential to achieve successful weight reduction. The most important modification in the dietary management is directing the child towards a healthy eating pattern. Severe calorie restriction is not recommended in the paediatric population. The basic concept is a nutritionally balanced diet. The best diet for a child is home-cooked food. It would be a challenge for the parents when they also have an undernourished child in the same household for whom they need to prepare meals with higher energy density while making a low-fat, low-carb meal for the obese child. As a result, chances are extremely high for poor adherence and drop-off from the prescribed lifestyle modification interventions. Most studies published to date on clinic -based weight reduction programmes have demonstrated either a low level effectiveness or only short-term positive effect [15, 16]. A recent Sri Lankan study showed that a higher level of paternal education, child’s psychological motivation and reduced screen time are associated with successful outcome in a lifestyle modification programme [17].

In this context, the general practitioner can play a pivotal role in the community setting. Generating awareness through appropriate health education and empowering caregivers of children need to be considered with high priority. Each and every visit to the GP could make a difference in the family’s attitude and approach to caring for their children with nutritional concerns. In this regard, addressing the development of healthy eating habits in the child starting from early infancy is essential. The general practitioner can play a key role in inculcating a better parenting style where responsive feeding is established very early in life followed by introduction of complementary feeding using healthy food choices. By 8-9 months, parents have to start dining with their children as a family, so that role modelling takes place during the meal times. It would allow infants watch their parents and other family members trying new food and the ways of communicating hunger and satiety. Force-feeding

which is a very common practice in Sri Lanka, though not in record, has to be completely discouraged. Most importantly, parents should not feed children to satisfy their own emotional needs but to fulfill the child’s own requirement.

In dealing with older children and adolescents, the communication skill of the medical practitioner will be a decisive factor in achieving success of a lifestyle modification intervention. Adequate health education, delivered appropriate to the child’s age is crucial prior to introduction of the lifestyle changes. Molding an adolescent’s mindset to view body composition maintenance as a proactive behaviour that contributes to the development of their personality and personal wellness would be a successful approach.

General practitioners, in addition to dealing with individual families coming to their practice, can extend their influence on a wider community of the general public through media channels. This

collaborative effort ensures a more comprehensive and effective approach to managing the double burden of malnutrition in general practice.

Children and adolescents with obesity could be filtered at general practise to be referred to the specialist paediatric clinics through identifying associated comorbidities such as metabolic abnormalities, obstructive sleep apnoea and psychological concerns.

Infrastructure to Manage Both Conditions in the Same Community

Addressing the double burden of malnutrition at the general practice level requires a comprehensive and multifaceted approach. It is mandatory to improve the facilities to promote health education, raising awareness about balanced nutrition, healthy eating habits, and the importance of physical activity. While uplifting the infrastructure facilities, steps have to be taken to update the knowledge and communication skills of the general practitioners on managing childhood obesity in a community affected with double burden of malnutrition. This could be achieved through well-planned training programmes and workshops at national level. The well-equipped GP is an asset to modify the attitudes and thinking patterns of parents with regard to child nutritional problems.

As part of multi-dimensional approach to curb childhood obesity, improving accessibility and affordability to nutritious food especially to vulnerable populations would be of paramount importance. At the same time, the healthcare infrastructure has to be strengthened with the facilities to diagnose and manage both undernutrition and obesity.

Implementation of community-based interventions with the involvement of general practitioners, in the form of community programmes targeting both undernourished and obese individuals would be effective.

National level implementation of policies through governmental leadership to reform obesogenic environments, attitudes towards healthy eating and physical activity of children would pave the way towards permanent societal changes [18, 19].

Conclusion

Addressing the double burden of malnutrition in South Asia is a complex challenge, but with a concerted effort from governments, healthcare providers, communities, and international organizations, it would be possible to make progress in managing childhood obesity and undernutrition simultaneously. General practitioners have a pivotal role to play to support affected families with an individualized nutrition-sensitive approach.

Continued research and data collection to monitor and assess the trajectories of both conditions will be mandatory to design evidence-based interventions to address these complex clinical dilemmas and associated social determinants of health.

References

1. World Health Organization. Overweight and Obesity. Available online https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight (Accessed on 10 March 2020).
2. Maffeis, C., & Tatò, L. (2001). Long-term effects of childhood obesity on morbidity and mortality. Hormone research. 55(1), 42-45.

3. Commission on Ending Childhood Obesity. Report of the Commission on Ending Childhood Obesity. Geneva, Switzerland: World Health Organization; 2016.
4. NCD Risk Factor Collaboration (NCD-RisC) (2017). Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128•9 million children, adolescents, and adults. Lancet. 390:2627–42. https://doi.org/10.1016/S0140-6736(17)32129-3
5. Di Cesare, M., Sorić, M., Bovet, P., Miranda, J. J., Bhutta, Z., Stevens, G. A., ... & Bentham, J. (2019). The epidemiological burden of obesity in childhood: a worldwide epidemic requiring urgent action. BMC medicine. 17, 1-20.
6. World Health Organization. Levels and trends in child malnutrition: UNICEF/WHO/World Bank Group joint child malnutrition estimates: key findings of the 2023 edition. InLevels and trends in child malnutrition: UNICEF/WHO/World Bank Group joint child malnutrition estimates: key findings of the 2023 edition 2023.
7. Hettiarachchi J, Jayatissa R, Wickramasinghe SC, Wijeywardena K. (2018). Overweight and obesity among adolescent school children in the Colombo education zone. Journal of the Postgraduate Institute of Medicine. 5(1).
8. Kiridana V, Karunaratne R, Ranasinghe JC, Munasinghe TS, Karunadasa UI, et al. (2021). Prevalence of Overweight, Obesity and Metabolic Abnormalities Among 12-15 Year Age Group in an Urban City in Sri-Lanka. Sri Lanka Journal of Medicine. 30(1):16-24(DOI: 10.4038/ sljm.v30i1.232)
9. Naotunna NP, Dayarathna M, Maheshi H, Amarasinghe GS, Kithmini VS, Rathnayaka M, et al. (2017). Nutritional status among primary school children in rural Sri Lanka; a public health challenge for a country with high child health standards. BMC public health.17:1-1.
10. Schneider, D. (2000). International trends in adolescent nutrition. Social Science & Medicine. 51 (6), 955-967.
11. Hossain FB, Shawon MS, Al-Abid MS, Mahmood S, Adhikary G, Bulbul MM.(2020). Double burden of malnutrition in children aged 24 to 59 months bysocioeconomic status in five South Asian countries: evidence from demographic and health surveys. BMJ open. 10(3), e032866.
12. Shinsugi C, Gunasekara D, Gunawardena NK, Subasinghe W, Miyoshi M, Kaneko S, Takimoto H. [2019] Double burden of maternal and child malnutrition and socioeconomic status in urban Sri Lanka. PloS one.14(10), e0224222.
13. Directorate of non-communicable diseases available at https://www.ncd.health.gov.lk/. [Accessed on 10th of September, 2023]
14. UNICEF. Progress for Children - A report card on adolescents. April 2012. Available from:https:// www.unicef.org/media/86401/file/Progress_for_Children No._10_EN_04272012.pd f.
15. Metcalf B, Henley W, Wilkin T. (2012). Effectiveness of intervention on physical activity of children: systematic review and meta-analysis of controlled trials with objectively measured outcomes (EarlyBird 54). BMJ. 345:5888.
16. Wieland LS, Falzon L, Sciamanna CN, Trudeau KJ, Folse SB, Schwartz JE, et al. (2012). Interactive computer-based interventions for weight loss or weight maintenance in overweight or obese people. The Cochrane database of systematic reviews. 8,CD007675.

17. Vidanapathirana, G., Vidanapathirana, N. S., Tennakoon, S., & Kiridana, D. V. K. (2023). Characteristics associated with successful treatment outcome in children with overweight and obesity at a tertiary care clinic in Sri Lanka.

18. Gortmaker SL, Swinburn BA, Levy D, Carter R, Mabry PL, Finegood DT, et al.(2011). Changing the future of obesity: science, policy, and action. The Lancet. 378(9793), 838-47.

19. WHO guidelines on physical activity and sedentary behavior 25 November 2020 | Guideline Available at https://www.who.int/publications/i/item/9789240015128.