## LETTER TO THE EDITOR

## Seeds of change: Fostering nutritional education through school kitchen gardens

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Dear Madam, Eighty-two percent of adolescents are at risk of developing Non-Communicable Diseases (NCDs) due to physical inactivity and low fruit and vegetable intake Research has consistently shown that vegetable consumption in children is well below recommended amounts. According to a recent study in Karachi, consumption of discretionary food items such as food that is not necessary to fulfil the nutrient requirement and is consumed for enjoyment such as sugar-sweetened beverages was more than vegetable intake in school children.

A key aspect of addressing the issue lies in promoting dietary diversification, which is to increase the type of foods consumed to ensure that children receive a wide range of nutrients essential for their growth and development. One effective strategy to promote dietary diversification and increase vegetable intake among school children is the establishment of a school kitchen garden. The concept of school kitchen gardens holds tremendous potential to improve health and well-being in school-going children. Interventions in this area have predominantly been used to influence school-aged children's knowledge, attitudes, and/or behaviours toward diet and nutrition, particularly in connection to increasing vegetable consumption. School gardens serve as interactive and educational platform for children to learn about different types of vegetables, how they grow, and their nutritional benefits. Children actively engage in planting, tending, and harvesting the produce, which creates a sense of ownership and excitement about consuming what they have cultivated. A recent systematic review has shown promising effects in improving children's knowledge of food, nutrition, gardening, and science. Acquisition of knowledge is the basis for behaviour. This is a holistic approach that not only educates but also serves to familiarize students with a variety of vegetables, making it more likely for them to include these vegetables in their dietary choices.

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In conclusion, school kitchen gardens offer an excellent, practical solution that integrates nutrition education into the extra curriculum while ensuring that students are actively consuming nutrient-rich vegetables. As a result, we can potentially witness healthier, more well-informed generations who understand the significance of dietary diversification. By increased exposure to a variety of vegetables through school kitchen gardens, children are not only learning about healthy eating but are also actively engaged in the cultivation and consumption of nutrient-rich produce.

I urge our educational institutions to consider the benefits of implementing school kitchen gardens as a powerful tool to nurture nutrition education to address the pressing issue of low vegetable intake among our children.

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## References

- Uddin R, Lee EY, Khan SR, Tremblay MS, Khan A. Clustering of lifestyle risk factors for non-communicable diseases in 304,779 adolescents from 89 countries: A global perspective. Prev Med. 2020; 131:105955. doi: 10.1016/j.ypmed.2019.105955.
- Abidi SHR, Almas A, Ghani A, Sabir S, Iqbal R. Assessment of macronutrients consumption in the diet of adolescent school children in four seasons: a longitudinal study from an urban city in Pakistan. J Health Popul Nutr. 2021;40:43. doi: 10.1186/s41043-021-00268-5.
- Ohly H, Gentry S, Wigglesworth R, Bethel A, Lovell R, Garside R. A systematic review of the health and well-being impacts of school gardening: Synthesis of quantitative and qualitative evidence. BMC Public Health. 2016; 16: 286. doi: 10.1186/s12889-016-2941-0.
- Jaenke RL, Collins CE, Morgan PJ, Lubans DR, Saunders KL, Warren JM. The impact of a school garden and cooking program on boys' and girls' fruit and vegetable preferences, taste rating, and intake. Health Educ. Behav. 2012; 39:131-41. doi: 10.1177/ 1090198111408301
- Chan CL, Tan PY, Gong YY. Evaluating the impacts of school gardenbased programmes on diet and nutrition-related knowledge, attitudes and practices among the school children: a systematic review. BMC Public Health. 2022; 22:1251.doi: 10.1186/s12889-022-13587-x.