

## Abstract

**Cite this article:** Israr B, Pasha I, Shaukat R, Arif S, Inam A, Rafaqat S, and Hafeez H (2025). Assessing adherence to National dietary guidelines in school children aged 6-10 years in Pakistan. *Proceedings of the Nutrition Society* 84(OCE2): E241. doi: [10.1017/S0029665125101109](https://doi.org/10.1017/S0029665125101109)

# Assessing adherence to National dietary guidelines in school children aged 6-10 years in Pakistan

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The national dietary recommendations are intended to promote dietary habits that enhance the well-being and long-term health of the population <sup>(1)</sup>. Monitoring the dietary intake trends of the population over time and evaluating the percentage of people who do not meet the nutritional targets can help to identify significant disparities between actual and recommended intakes <sup>(2)</sup>. This study aims to evaluate the dietary patterns of school children and their adherence to current Pakistan Dietary Guidelines (PDGs).

In this study, compliance with PDGs <sup>(3)</sup> was evaluated in school-aged children through a situational analysis survey from Faisalabad City. A total of 540 school-going children aged 6 to 10 years were selected from schools belonging to different socio-economic statuses categorized as private (High SES), public (Low SES) and semi-private (Middle SES). Dietary data from the participants was primarily collected through a retrospective tool <sup>(4)</sup>. Dietary information was recorded using 24-hour dietary recall method for 5 consecutive days <sup>(5)</sup>. Food items consumed were categorized into 7 food groups (cereal, meat, lentils, fruits, vegetables, milk, and others) based on PDGs. A statistical analysis was performed using the Chi-square test, based on the frequency distribution and percentage of the collected data.

Cereal group showed the most compliance (>50%) in all three schools while lowest compliance was found in lentil group. Extremely poor compliance was recorded in the public school (5%) for meat group. The semi-private school showed the best compliance in milk group with 85% students consuming the recommended servings. All schools had more than 50% compliance in the vegetable group, with semi-private schools exhibiting highest rate at 76%. Lentil group showed extremely poor compliance with 6%, 13%, and 16% in Private, Semi-private, and Public Schools respectively. Public schools showed the lowest compliance with fruit group intake at 34.2%, while both private and semi-private schools were approximately 60% compliant. Moreover, a high intake of processed foods was recorded (>85%) in private school. A significant proportion of students was also observed consuming one or more servings of beverages (>50%) in all three schools. In contrast, a low percentage of students (<50%) consumed sweets in all three schools. Variation between three schools for all food groups was found to be statistically highly significant ( $p < 0.05$ ) which shows differences in their consumption patterns.

Results show a relative match of food groups including cereals, vegetables and milk with PDGs was low to moderate whereas poor intake was recorded for food groups including meat, lentils and fruits. Consumption of processed foods as well as beverages was high in comparison to the rest of the food groups. Hence, the adherence to PDGs was poor and there is a need to bring behavior changes via school nutrition program focusing on nutrition education.

**Acknowledgments:** Author is very grateful to Government of Pakistan to carry out this study under Pak-Korea Nutrition Center.

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