Malnutrition and Some Related Factors in Primary School Children, Semnan, Iran


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Background: Malnutrition places a direct and indirect burden on individuals, especially children and communities. Malnutrition or growth failure can occur because of various reasons. This study aimed to determine the prevalence of thinness, underweight, stunting, and their related factors in students aged 6-12 years in Semnan province, central Iran.

Participants and methods: Using multistage sampling, a total of 2195 primary students in Semnan province, between November 2012 and March 2013, were selected randomly and the prevalences of wasting, underweight, and stunting among the students were estimated. Students' weights were measured using a Burer digital scale (Germany), with an accuracy of 100 g. Students' heights were measured using a nonstretchable tape measure. The BMI was calculated. Using the CDC 2000 standards, values less than the fifth percentile of BMI, weight-for-age, and height-for-age were defined as thinness, underweight, and stunting, respectively.

Results: In the total sample, 12.5, 9.2, and 9.0% of the students, respectively, were affected by thinness, underweight, and stunting. Lack of access to a computer increased the odds ratio (OR) of thinness by 1.38 times [OR=1.38, 95% confidence interval (CI): 1.06-1.78, P=0.015). Other variables (including age) did not show a significant association with the prevalence of thinness. Similarly, of all the variables studied, only access to a computer showed a significant association with the prevalence of underweight (OR=1.37, 95% CI: 1.02-1.84, P=0.036). The prevalence of stunting was associated significantly with a history of parasitic infection (OR=2.32, 95% CI: 1.53-3.51, P

Conclusion: The prevalence of malnutrition among students is high. Hence, families and stakeholders must pay special attention to various measures including healthcare services to improve the condition. Education, health, and support programs must be strengthened and continued.