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Prevalence of malnutrition among refugee children traveling on “Balkan Route”

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Abstract

Introduction:

Undernutrition indicates a lack of the necessary energy, macro or micronutrients in person's dietary intake. Overnutrition usually refers to existence of overweight and obesity. The objective of our study was to assess the prevalence of both undernutrition and overweight and obesity among refugee children population, traveling on so-called “Balkan route” from Syria and Iraq towards Western Europe, temporally situated in two transit centers in Macedonia, one at the south of the country (camp Gevgelija) and one at north (camp Tabanovce).

Methods:

Total of 99 children aged 0 to 19 years were measured for their height and weight. Of those children 35 were at the age of 0 to 5 years and 64 at the age of 5 to 19 years. WHO's child growth standards and references were used to assess the nutritional status of measured children. Undernutrition was defined through stunting and wasting, as below -2 standard deviations (SD) of the *Height-for-age* and *Weight-for-height* indexes. Overweight and obesity were defined as above +1 and +2 SD of the z-score for *BMI-for-age* index respectively for children age 5 to 19 and above +2 and +3 SD for *Weight-for-height* index for children up to 5 years of age.

Results:

Out of all children age 0–5, 26.5% were stunted (95% CI 10.2–42.8), 31.3% of them boys and 22.2% girls. In this population of children 5.9% were moderately wasted (95% CI 0–15.3), almost all of them boys. Among children age 5–19, 20.6% were below -2 SD of the index *Height-for-age* (95% CI 9.8–31.4), 19.4% of them boys and 22.2% girls. There were no obese children under 5 in both transit centers in Macedonia, and 11.8% were overweight (95% CI 0–24.1). Out of all children age 5–19, 23.4% were considered overweight or obese (95% CI 12.3–34.6), 19.4% of them boys and 28.6% girls, and 3.1% obese (95% CI 0–8.2).

Conclusions

When compared to the prevalence of both undernutrition and overweight (including obesity) in children in Macedonia, refugee children have higher prevalence of stunting and wasting. Overnutrition coexisted with undernutrition in refugee children population, particularly among children age 5 to 19. Specific conditions and relatively small number of participants in the study should be taken into account when drawing general conclusions.

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Conflict of Interest

There is no conflict of interest.