ANTHROPOMETRIC ASSESSMENT OF NUTRITIONAL STATUS AMONG SOUTH SINAI CHILDREN

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Background No information exists on nutritional status of South Sinai residing children, Egypt.

Aim Assessing prevalence of malnutrition among South Sinai children.

Methods Cross sectional study included 3987 healthy children (0 to 11 years); randomly selected; represent about 12% of all children from the 6 areas of South Sinai. Height and weight were measured. Weight-for-age Z score (WAZ), height-for-age Z score (HAZ) and weight-for-height Z score (WHZ) were used to estimate the child’s nutritional status. Venous blood sample was obtained to measure plasma hemoglobin level for school students.

Results Wasting (WHZ< -1.96 SD), underweight (WAZ< -1.96 SD) and stunting (HAZ< -1.96 SD) were prevalent among 4.2%, 8.9% and 11%, respectively. Prevalence of underweight, at risk of wasting and be anemic were more prevalent among boys than girls (p<0.01). On the other side, 8% were overweight and 4% were obese. Although small percentage of anemic school children was suffering from growth deviation (wasting, 2.8%; underweight, 5.6%; stunting, 9.9%; overweight, 2.8% and obese, 1.4%), 55% of them were at risk of growth deviations (wasting, underweight and stunting). Under nutrition were more prevalent among South Sinai children than their peers in Greater Cairo, while over nutrition was less prevalent.

Conclusion The highest prevalence of malnutrition was detected in infant’s age. Anemia of primary school children was more prevalent among those at risk of under nutrition than undernourished ones.

Community education on environmental sanitation and personal hygiene practices, proper child rearing, breast-feeding and weaning practices would possibly reverse the trends.

ELEMENTARY SCHOOL-BASED OBESITY PREVENTION INTERVENTION EFFECT ON WAIST CIRCUMFERENCE AMONG MULTIETHNIC 6–13 YEAR OLDS

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Background Childhood onset obesity and related health consequences continue to be major clinical and public health issues in the USA and abroad. Schools provide an opportunity to implement preventive strategies to large, diverse pediatric audiences. Healthier Options for Public Schoolchildren (HOPS) was a school-based obesity prevention intervention with nutrition and physical activity components implemented in the elementary school setting targeting 6–13 year olds.

Methods HOPS was a quasi-experimental elementary school-based obesity prevention intervention targeting ethnically diverse 6–13-year-olds (Kindergarten–6th). Over four school years (August 2004–June 2009), five schools (four intervention; one control, N=3,183, 48% Hispanic) in Florida participated in the study. Waist circumference (WC) data was reported in the Fall of 2005 and Spring of 2006 only and these one year results are reported here.

Results Among boys, the mean incremental change in WC (measured in centimeters [cm]) increase was significantly less in the intervention (1.35 cm +/- 0.88 [SD]) versus control schools (3.83 cm +/- 0.94) (P<0.0001). Among girls the mean incremental change in WC increase was significantly less in the intervention (1.20 cm +/- 0.84) versus control schools (4.17 cm +/- 0.89) (P<0.0001). Similarly, waist-to-height ratio results showed that the intervention group mean incremental change was significantly less versus the control group for boys (P=0.0002) and girls (P<0.0001).

Conclusions Elevated WC is strongly correlated with cardiometabolic disease risk factors and should be monitored in young children as such. School-based obesity prevention interventions show promise in improving weight and potentially cardiometabolic health in elementary-school aged children.