

School-Based Nutrition Interventions Had Impacts on Dietary Diversity and Meal Frequency of Adolescent Girls in Ethiopia

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Objectives: Adolescence is a critical period of physical and psychological development, especially for girls as poor nutrition can affect their well-being as well as the well-being of their children. In Ethiopia, where the population is very young, evidence on the nutrition of adolescent girls and their determinants is scant. We tested the impact of a package of nutrition interventions delivered primarily through schools and implemented by Alive & Thrive (A&T) on the diet of adolescent girls.

Methods: A cluster-randomized trial design compared 27 primary school clusters in A&T areas to 27 clusters in non-A&T areas in the SNNP and Somali regions. We surveyed adolescent girls (n = 536) aged 10–14 years and enrolled in primary school grades 4–8, following at least one school semester (approximately 4 months) of implementation in March–April 2021. Using linear regression models, we tested for differences between program groups on dietary diversity, meal

frequency, and consumption of unhealthy foods. In adjusted models, we controlled for age, household food security and wealth, and region.

Results: We observed significant impacts on dietary diversity score (1.4 food groups) and minimum dietary diversity (OR: 5.2). Among the food groups, there was significantly higher consumption of 5 groups in A&T areas: pulses, meats, eggs, vitamin A-rich fruits and vegetables, and other fruits. There was also a significant impact on meal frequency of 0.9 meals/snacks in the previous 24 hours, with girls in A&T areas consuming 4.0 meals/snacks out of 6 eating times compared to 3.2 in control areas. There was no significant impact on consumption sweets, baked sweets, sweetened beverages, and fried and salty foods among girls, but there was lower consumption of sweets in the previous 24 hours in A&T (14%) versus control areas (23%).

Conclusions: Integrating nutrition interventions into primary schools in Ethiopia was feasible and achieved a significant impact on girls' dietary diversity and meal frequency. Reinforcing messages about eating better and more often resulted in incremental behavior change related to dietary diversity and meal frequency; however, telling adolescents not to eat junk foods that they crave or enjoy without changing their food environments may be less successful in curbing consumption.

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