**Effect of nutrition education on dietary diversity and academic achievement among adolescent school girls in North Shoa Zone, Oromia, Ethiopia**

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**Abstract**

**Background:** Globally, adolescent students, particularly girls, are severely affected by malnutrition, in part because of their specific biological needs, and that they have not been considered a health and nutrition priority. Hence, this study was designed to evaluate the effect of a health belief model based nutrition education on the dietary diversity and grades of adolescent school girls in the north Shewa zone, Oromia, Ethiopia.

**Methods:** A quasi-experimental study was done in the north Shewa zone, Oromia, Ethiopia. Adolescent school girls ages 10 to 19 y old were selected from the zone districts from February 1 to May 30, 2023. The main outcome variables included grades and dietary diversity, which were collected on the baseline and end line from the intervention and control groups.

**Results:** This study revealed that there were statistically significant differences in good nutritional knowledge, 88.1% versus 69.2% (x2 = 16.835, P < 0.001), good dietary diversity; 77.4% versus 45.9% (x2 = 33.247, P < 0.001) and grades above average, 90.6% versus 65.4% (x2 = 29, P < 0.001) among school adolescent girls between the intervention and control groups, respectively. Regarding positive attitude, 84.3% versus 85.5% (x2 = 0.098, P = 0.876), there was no statistically significant difference between the intervention and control groups.

**Conclusion:** In this study, the dietary diversity scores and grades of adolescent school girls in the intervention group were higher than those in the control group. Therefore, health belief model-based strategies should be recommended as effective communication channels to improve adolescent school girls’ dietary diversity and academic performance.