

Healthy Schools: Education Intervention Program to Prevent Diabetes in Indian School Students

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Learning Objectives

- 1) To understand the impact of a health education program on prevention of NCDs among Indian school students
 - 2) To understand what types of health education activities can improve student knowledge and healthy lifestyle practices related to NCDs and their prevention
 - 3) To learn examples of health education practices that can be replicated in schools globally
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Abstract

Background: Non-communicable diseases (NCDs) are among the leading causes of morbidity and mortality, with disproportionately higher rates in developing countries.¹ Arogya World Healthy Schools Program conducts a two-year health education program focused on primary prevention of NCDs in Indian schools to understand if such a program has an immediate effect on students' knowledge, attitudes, and practices related to diabetes prevention, and whether any positive lifestyle changes are maintained in the long term.

Methods: Instructors and student peer leaders facilitated five NCD prevention classroom activities with 1,502 sixth- and seventh-grade students from ten New Delhi schools, over one year. A questionnaire assessed knowledge, attitudes, and practices related to healthy lifestyle habits pre- and post-intervention. Data was analyzed using Microsoft Excel and R. McNemar tests, chi-square tests, and t-tests were performed using Bonferroni adjustment for multiple testing ($\alpha \leq 0.001$). Only students with complete responses were included in the analysis for each question.

Results: 983 students (65.4%) were male and 519 (34.6%) were female ranging from 9-14 years at baseline. Improvement (i.e., students incorrect pre- but correct post-intervention) was observed across all nine questions assessing knowledge of disease and prevention. Knowledge that a balanced diet is essential and recognition of various forms of physical activity (e.g., household chores) also improved ($p < 0.001$). More females than males improved in knowledge that exercise is not solely for overweight people ($p < 0.001$). Weekly dancing activity and monthly fruit and vegetable consumption increased ($p < 0.001$). Females increased their dance frequency more than males ($p < 0.001$).

Conclusions: Implementing a low-cost, scalable health education program utilizing peer-led group discussions and hands-on games to engage students on nutrition, physical activity, and disease prevention improved student knowledge and self-reported healthy lifestyle practices. Implementing similar school-based programs globally may potentially shift lifestyle habits to prevent NCDs around the world in the years to come.

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