ABSTRACT

Introduction: Coronary artery disease is the most prevalent heart disease in India contributing more than 95% of the total CVD prevalence and more than 85% of all CVD-related deaths. Evidence from laboratory, clinical, pathological and more recent non-invasive studies provide convincing evidence of the link between established potentially modifiable risk factors and accelerated atherosclerotic processes in adolescence. In India CAD hits people at a relatively younger age and with more severity irrespective of geographic, gender, socioeconomic, and educational differences. So it is important to provide prevention strategies at younger ages to curb the escalation CAD and its risk factors considering its extreme prematurity and malignant nature. Such a response needs to be integrated and implemented at the population level through coordinated mechanisms, environmental modification, and education.

Purpose: To assess the effectiveness of a school-based intervention regarding prevention of coronary artery disease on selected health behaviors and biophysiological parameters among adolescents in selected schools of Kerala.

Methodology: A quasi-experimental pretest posttest design was conducted among adolescents studying in 7th standard of Thrissur district, Kerala. Using convenient sampling a total of 252 adolescents were selected. A school-based intervention having a classroom component, family component, and physical activity component was administered for duration of 4 weeks to experimental group after pretest. Health behaviors (knowledge and lifestyle practices) and biophysiological parameters were measured at 1 month, and 6 months after intervention. Collected data were analyzed using descriptive and inferential statistics using SPSS version 20.

Results: Majority of the adolescents were aged 12 years in both experimental (72.2%) and control group. Out of all, 71.1% and 61.4% in of them were male in experimental and control group respectively. At 6 months the school-based intervention was effective in improving the knowledge regarding prevention of CAD (p < 0.001), dietary behavior (dietary consumption and dietary habits) (p < 0.001), physical activity (p < 0.001), and decreasing screen time (p < 0.001), habit of viewing television during
meals ($p < 0.001$), waist hip ratio ($p < 0.01$), waist height ratio ($p < 0.05$), systolic blood pressure ($p < 0.001$), diastolic blood pressure ($p < 0.001$), and heart rate ($p < 0.001$) to a statistically significant level among adolescents.

**Conclusions:** The school-based intervention had beneficial effects on improving health behaviors and biophysiological parameters among adolescents. Over time, these programs can lower the prevalence of cardiovascular disease risk factors that track into adulthood thereby favourably altering coronary artery disease related morbidity and mortality in India.

Keywords: Adolescents; School Based Intervention; Health Behaviors; Biophysiological Parameters.