

ICCN Poster Presentations

Nutrition and cardiovascular disease

Educational intervention for modifying the lipid levels of school going adolescents

SJ Passi*¹ Sukhneet Suri¹ and SC Manchanda²

¹*Institute of Home Economics (University of Delhi), New Delhi, India,* ²*Department of Cardiology,
All India Institute of Medical Sciences, New Delhi, India.*

India is witnessing a rapid rise in the incidence of premature CAD. Current evidence indicates that while clinical manifestations may appear in the middle/late adult life, the initiation of CAD (atherosclerosis) begins in childhood itself and the lesion progress through several stages due to the cumulative effect of various risk factors. Elevated total cholesterol particularly LDLc has been identified to be most closely associated with the morbidity and mortality due to atherosclerotic heart disease. Since serum cholesterol levels track well from adolescence to adulthood, it is imperative to screen adolescents for hypercholesterolemia and impart need-based nutrition and health education so as to curb the rising incidence of CAD and its associated risk factors.

Aim: To study the present health status of adolescents belonging to different socio-economic groups; identify risk factors associated with the early onset of CAD; develop relevant IEC material to impart need-based education and assess its efficacy.

Methodology: A total of 300 adolescents aged between >15 to <18 years studying in schools providing educational facilities to various socio-economic segments of the society were enrolled for the study. Data were gathered on their lipid levels, B.P as well as anthropometric measurements in the pre and post intervention phase. Educational intervention was carried out in the form of four lecture-cum-discussion sessions held at weekly intervals followed by three recapitulation cum problem solving sessions.

Results: The pre and post intervention data (after a gap of ~10 months) indicated significant positive change in the lipid levels, B.P and anthropometric measurements. The mean total cholesterol of the boys and girls registered a drop of 12.33mg/dl (8.24%) and 19.32mg/dl (11.86%) respectively. In the pre intervention phase while 11.26% were high risk hypercholesterolemics (TC \geq 200mg/dl) and 25.3% borderline cases (TC >170mg/dl-<200mg/dl), in the post intervention phase the number reduced to 2.11% and 11.97% respectively. In case of the girls and boys, the LDLc dropped by 18.97mg/dl (girls) and 23.15mg/dl (boys), TG by 20.8% and 16.9%; while the HDLc registered an increase by 20.4% and 17.5% respectively. However, there was no significant change in the VLDLc levels.

Conclusions: Imparting relevant nutrition and health education with special emphasis on the prevention of CAD can go a long way in attenuating the risk factors associated with the early onset of heart disease.