

Metabolic syndrome and diabetes risk among Health Sciences adult students: A cross-sectional study from Nepal.

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Abstract`

Objective: Diabetes and metabolic syndrome(MetS) are inter-connected metabolic disorders which have become the major public health burden worldwide. Therefore, the aim of this study was to assess the frequency distribution of metabolic syndrome and diabetes risk score among young individuals.

Methods: A cross sectional study was conducted among students of age group(18 to 25 years). All the socio-demographic data, anthropometric measurements, lifestyle and dietary habits were recorded using standard questionnaire. Fasting plasma glucose and lipid profile were estimated using standard manufacturer's guideline. Prevalence of MetS was analysed using Pearson's Chi-square test and non-parametric independent t-test and the Diabetes risk score of each individual was calculated by The Finnish Diabetes Risk Score(FINDRISC tool). Association between cardio-metabolic risk factors and diabetes risk score was established by ANOVA test.

Results: Among total 917 students, 739(80.59%) responded for the study with complete information of which 273(36.9%) were male and 466(63.1%) were female. Median age of the study population was 20 years. Of total, 7.1% of individuals met the definition of metabolic syndrome according to the criteria of HJIS followed by 5.8% IDF, 4.0% NCEP ATPIII, 3.6% WHO and 2.2% AACE. The most prevalent defining components were low HDL-C(77.6%) along with abdominal obesity(30.6%).

Among total, 553(74.80%) were under low risk, 164(22.18%) were at slightly elevated risk, 15(2.02%) were at moderate risk and 7(1.01%) were at high risk of diabetes. BMI was significantly increased with increased risk of diabetes**(**$p<0.001$). Total cholesterol and low density lipoprotein were higher at significant level with increasing diabetes risk score.

Conclusion: The prevalence of Metabolic Syndrome was considerably high. Likewise, risk factors for diabetes were common among young adults. Early assessment of metabolic and diabetes risk in young may provide insights for preventive plan for risk population.

Biography

I have completed Bachelor in Medical Laboratory Technology at the age of 22 years from Manmohan Memorial Institute of Health Sciences. I had worked as Laboratory Technologist at South Asian Polyclinic and Diagnostic Center for about 1 year. I am working as the Laboratory Technologist at Nova International Diagnostic Center and as Coordinator at Nepal Institute of Health Sciences for about 2 years. I have attended about six conferences organized in Nepal and done poster presentation in one of them.

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