

## Prevalence and Risk Factors of Metabolic Syndrome in Adults of Terai Region of Nepal

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**Abstract :** Background: The metabolic syndrome is emerging as a major public health concern in the world. Urbanization, surplus energy uptake, compounded by decreased physical activities, and increasing obesity are the major factors contributing to the epidemic of metabolic syndrome worldwide. However, prevalence of metabolic syndrome and its risk factors are little studied in Terai region of Nepal. The objectives of this research were to estimate the prevalence and to identify the risk factors of metabolic syndrome among adults in Terai region of Nepal. Method: We used a community based cross sectional study design. A total of 225 adults (age: 18 to 80 years) were selected from three district of Terai region of Nepal using cluster sampling by camp approach. IDF criteria (central obesity with any two of following four factors: triglycerides  $\geq 150$  mg/dl or specific treatment for lipid abnormality, reduced HDL, raised blood pressure and raised fasting plasma glucose or previously diagnosed type 2 diabetes) were used to assess metabolic syndrome. Interview, physical and clinical examination, measurement of fasting blood glucose and lipid profile were conducted for all participants. Chi-square test and multivariable logistic regression were employed to explore the risk factors of metabolic syndrome. Result: The overall prevalence of metabolic syndrome was 70.7%. Hypertension, increased fasting blood sugar, increased triglycerides and decreased HDL were observed in 50.7%, 32.4%, 41.8% and 79.1% of the subjects respectively. Socio-economic and behavioral risk factors significantly associated with metabolic syndrome were gender male (OR=2.56, 95% CI: 1.42-4.63;  $p=0.002$ ), in service or retired from service (OR=3.72, 95% CI: 1.72-8.03;  $p=0.001$ ) and smoking (OR= 4.10, 95% CI: 1.19-14.07;  $p=0.016$ ). Conclusion: Higher prevalence of Metabolic syndrome along with presence of behavioral risk factors in Terai region of Nepal likely suggest lack of awareness and health promotion activities for metabolic syndrome and indicate the need to promote public health programs in this region to maintain quality of life.

**Keywords :** metabolic syndrome, Nepal, prevalence, risk factors, Terai

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