# Non Communicable Diseases Risk Factors: STEPS survey Nepal 2013

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**Background**

In Nepal, the first national-level NCD risk factor survey was conducted in 2007/08 to determine the prevalence of modifiable behavioral risk factors; however, this survey did not cover biological risk factors. Against this backdrop, the current study was conducted in 2012/13 (five years later) to collect baseline data on biological risk factors and determine the distribution of modifiable behavioral risk factors among the Nepalese population.

**Methods**

This national non-communicable diseases risk factor survey was conducted as a cross sectional study from July 2012 to June 2013 with data collection spread from January to June 2013. A sample size of 4,200 was used to represent the target population (15–69 year old adults) in Nepal. Multistage cluster sampling using a mix of probability proportionate to size (PPS) and systematic random sampling was applied using the sampling framework from the Nepal Census 2011 to select the participants. Out of the 921 Ilakas in Nepal, 70 were selected. Three clusters were selected from each of the sampled Ilakas using the probability proportionate to size sampling method, leading to the selection of 210 wards. Twenty households were selected from each cluster using systematic sampling. One participant out of the eligible candidates (15–69 years) in each selected household was selected to take part in the survey using the Kish method. The survey was conducted using the WHO non-communicable diseases STEPS instrument version 2.2, which consists of three Steps for measuring non-communicable diseases risk factors. Data was collected digitally using personal digital assistants (PDAs) xx from which data were transferred to Microsoft Excel on personal computers. Data cleaning was done using Statistical Package for Social Sciences 16.0 and analysis undertaken using Epi Info 3.5.1 using prior developed analysis commands. Descriptive weighted analysis was also undertaken along with complex sample analysis.

**Results**

The prevalence of smoking among respondents was 18.5% (men 27.0%, women 10.3%). The prevalence of alcohol consumption was 17.4% (men 28.0%, women 7.1%). The surveyed population ate fruit on average on 1.9 days in a typical week. Around 2.3% of respondents did not meet the WHO recommendations for physical activity for health. Among the surveyed population, 91.0% consumed powdered salt from the packet with two children on its logo. Around 95% of respondents were found to have 20 or more natural teeth. Among those with natural teeth, 9.5% had teeth in a poor or very poor state and 7.0% had gums in a poor or very poor state. Based on body mass index (BMI), one-tenth of respondents (10.4%) were found to be underweight, 67.9% were normal weight, 17.7% were overweight and 4% were obese. The prevalence of raised blood pressure or hypertension, excluding those on medication, was 23.4% (men 28.7%, women 18.5%). The prevalence of self reported diabetes was 1.9% (men 2.4%, women 1.4%). The prevalence of impaired fasting glycaemia was 4.1% (men 5.1%, women 3.2%). The prevalence of diabetes mellitus was 3.6% (men 4.6%, women 2.7%) This proportion was found to increase with age. The prevalence of raised total cholesterol including those currently on medication was 22.7% (men 24.5%, women 21.0%). The prevalence of low HDL was higher among women (79.3%) than men (61.2%). Regarding combined risk factors, only 0.4% of respondents did not have any of these risk factors, 84.5% had one to two risk factors and 15.1% had three to five risk factors. In both sexes this proportion was higher for the 55–69 year age group at 6.1% (men 7.3%, women 4.9%).

**Conclusions**

Non-communicable disease risk factors are highly prevalent among the Nepalese population, which is a serious public health problem. Unless urgent and targeted interventions are made to prevent, treat and control non communicable diseases and their risk factors, the burden of non-communicable diseases could become unbearable in Nepal. There is an urgent need for concerned agencies to plan interventions to prevent and control these risk factors.

**Keywords:** non-communicable diseases; prevalence; risk factors; STEPS survey.