ABSTRACT

**Purpose:** This study aimed primarily at identifying the prevalence of the Type 2 Diabetes Mellitus (T2DM), hypertension and metabolic syndrome (MS) in the urban Sikh population of Amritsar by means of a door-to-door survey. The secondary aim was to note the awareness and identification of the risk factors for the development Type 2 Diabetes Mellitus, hypertension and metabolic syndrome in the urban Sikh population of Amritsar.

**Methodology:** In the present study, we have assessed a particular population, the Amritsar urban Sikh community which has gained particular attention over the last few years because of the rising trend of Non-communicable Diseases (NCDs) among them. This community constituted of 70% of the total population of Amritsar according to the 2011 Census Report. The sample size of 1089 subjects was calculated. The standard WHO 30 cluster sampling approach was used to select the subjects from the sample population. Amritsar was arbitrarily divided into five equal zones namely (Z₁, Z₂, Z₃, Z₄ and Z₅). Each zone constituted of 13 Census Wards. Two members from each family were randomly selected for the study. A self-designed, professionally validated questionnaire, which included the demographic, physiological and psychological profiling of the subject, was given to them. The fasting blood sample was taken for the analysis of biochemical variables. The blood was analysed for serum cholesterol, (CHO), serum triglycerides (TG), High density lipoprotein (HDL), Low density lipoprotein (LDL), very low density lipoprotein (VLDL). The anthropometric readings were taken namely height, weight, waist circumference (WC) and hip circumference (HC). All protocols and consent documents were reviewed and approved by the Institutional Ethics Committee of Faculty of Sports Medicine & Physiotherapy, Guru Nanak Dev University, Amritsar.

**Analysis:** STATA 11.0 statistical software was used for data analysis. Student ‘t’-test, Pearson's chi-square test and binary logistic regression analysis test were applied for data analysis.

**Results:** The prevalence rate of T2DM, hypertension and MS in the population was 23.2%, 35.9% and 34.3% respectively. The risk factors significantly associated with these lifestyle disorders were age, gender, medium of cooking (oil used), serum
cholesterol, serum triglycerides, high density lipoprotein (HDL), alcohol intake and basal metabolic index.

Conclusion: The urban Sikh population in Amritsar has a high prevalence of lifestyle disorders with prevalence rates of T2DM, hypertension and MS estimated to engulf 23.2%, 35.9% and 34.3%, respectively. In the literature review past reports of previous prevalence rates have been cited. Compared with the prevalence rates cited, the prevalence rates of our study are higher. (pg no. 22,23). Further, a high prevalence of multiple modifiable risk factors associated with these lifestyle disorders was also found. The management of these lifestyle disorders is possible with a combination of medication and strict lifestyle changes. There is very little emphasis on the study of levels of awareness about these lifestyle diseases in India. Awareness of risk factors is essential for susceptible or ‘at risk’ patients to be able to modify associated lifestyle factors to lower their chances of developing these diseases. Further education and awareness also enables the patients with disease to manage their disease and reduce mortality and morbidity. Thus it was essential to study the awareness about the various risk factors in the urban Sikh population of Amritsar. The main reasons for this inadequate awareness includes demographic characteristics, health beliefs and lack of knowledge about them. Awareness programs are required to manage them in a social dimension. There is a need and scope for health education activity regarding these lifestyle disorders and their risk factors to promote healthy life style among this population. With the alarming increase in prevalence of these lifestyle diseases, the policy-makers and the healthcare providers should implement the measures for prevention and management of these non-communicable diseases to prevent complications and epidemiological outburst in the country.

Keywords: Prevalence, Type 2 Diabetes Mellitus, hypertension, metabolic syndrome, awareness, risk factors