



## Original Article

# Cigarette Smoking and Its Financial Burden among Iranian Households: Evidence from Household Income and Expenditures Survey

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## ABSTRACT

**Background:** The financial burden of cigarette smoking on households' budget is not well documented in Iran. We aimed to identify the determinants of cigarette consumption and its financial burden among households in Iran.

**Study design:** A cross-sectional study.

**Methods:** A total of 39,864 Iranian's households from 31 provinces were included in the analysis. Data on sociodemographic and socioeconomic characteristics (age, sex, household size, education level, employment status, income and wealth index), living area, number of cigarettes smoked and cigarette expenditures for households were extracted from the 2016 Household Income and Expenditures Survey (HIES). Tobit model was used to identify the determinants of cigarette smoking frequency and expenditures among Iranian households.

**Results:** The average number of cigarettes smoked and cigarettes expenditures by all household members was 85.25 cigarettes and US\$ 2.64 per month. Living in urban areas, wealth index of households, household income, household size and low educational attainment of household members were positively associated with frequency and expenditures of cigarette smoking. Results also indicated increasing patterns in the number of cigarettes smoked and cigarettes expenditures from east to west of the country. East Azerbaijan, Hamadan, Markazi and Chaharmahal va Bakhtiari provinces had higher cigarette smoking frequency and expenditures in Iran.

**Conclusions:** Tobacco control interventions in Iran should focus more on households living in urban areas and low-educated households. As the frequency of cigarette smoking was higher in the western region of Iran, comprehensive tobacco control policies should be adopted in western provinces.

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## Introduction

Cigarette smoking is one of the most important preventable causes of cardiovascular diseases, cancer and respiratory tract infection, among others <sup>1</sup>. The annual number of deaths due to smoking is much higher than the total deaths from AIDS, alcohol, addictive drugs, accidents, murder and suicide globally <sup>2</sup>. Smoking has an important role on the global burden of diseases. It is the risk factor for many non-communicable diseases such as cancer <sup>3</sup>. Smoking was the direct cause of 4,623 deaths in Iran in 2012<sup>4</sup>.

In addition to adverse health outcomes of smoking for the smokers, it is responsible for a significant financial healthcare burden for society due to smoking-attributable diseases<sup>5</sup>. Cigarette tax, banning the sale of cigarettes for younger age-groups and smoking ban on public places are some of the strategies to reduce tobacco consumption <sup>6</sup>. Despite these

tobacco control policies to reduce smoking prevalence, the monetary profits of smoking cigarettes for the manufacturing companies and excessive smuggling of this substance make cigarettes available cheaply in different places, especially in low- and middle-income countries (LMICs) <sup>7</sup>.

Although tobacco provides significant tax revenues to governments, smoking has a significant impact on households' budgets as well as the health status of individuals and societies as a whole <sup>8</sup>. Tobacco accounts for 6% of all healthcare costs worldwide. The total economic cost of smoking was US\$1,436 billion in 2012, equivalent to 1.8% of gross domestic products (GDP) of the entire world <sup>9</sup>. The total economic cost of smoking-attributable diseases in Iran was estimated to be US\$1.46 billion accounting for approximately 0.26% of Iran's GDP in 2014 <sup>10</sup>.