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Original Research

Which group of smokers is more vulnerable to the economic crisis?



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ABSTRACT

Objectives: Studies investigating whether smoking increases or decreases during economic downturn provided contrasting results. For the first time, we used direct questions to analyse changes in smoking behaviour due to the 2008 financial crisis, comparing socio-economic characteristics of smokers who changed with those who kept their smoking intensity.

Study design: Cross-sectional survey.

Methods: We used data from three annual surveys conducted in Italy in 2012–2014 on representative samples of the Italian general population aged ≥ 15 years.

Results: A total of 1919 current smokers were asked specific questions on the influence of the economic crisis that started in 2008 on their smoking behaviour. Overall, 77.4% of 1919 current smokers reported not to have changed their smoking behaviour, 19.1% to have reduced, and 3.5% to have increased their smoking intensity as a consequence of the economic crisis. The reduction in cigarette smoking increased with age: compared to the respondents aged <25 years, the multivariate odds ratio (OR) for those aged 25–44, 45–64 and ≥ 65 years were 0.65, 0.46 and 0.33, respectively (P for trend < 0.001). Reduction was significantly lower among intermediate (OR = 0.68 compared to low) and high education levels (OR = 0.28; P for trend < 0.001). A significant inverse trend for increasing consumption was observed with age ($P = 0.022$), education ($P = 0.003$) and family income ($P < 0.001$).

Conclusions: The large majority of current smokers did not change their smoking habit following the economic crisis. However, there are specific vulnerable subgroups of smokers, constituted by the young and subjects with low socio-economic status, that were reactive to the global economic crisis. These groups are more prone to change their smoking behaviours, either for better or –, in a smaller proportion –, for worse.

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Introduction

Previous studies have attempted to understand whether periods of economic downturn result in deterioration or improvement of population health, based on a variety of measures including psychological and behavioural morbidity, cardiovascular diseases, suicides and excess mortality.^{1–6} With respect to tobacco smoking, contrasting results have been reported. On the one hand, evidence from studies conducted prior to the 2008 global economic crisis, mainly based on routine economic cycles, suggested a pro-cyclical relationship with smoking (the crisis decreases smoking consumption), possibly explained by reduced affordability of tobacco products in hard times.^{7–12} On the other hand, some of the most recent studies based on ex-post analysis of smoking behaviour after the 2008 financial crisis reported a null or even a counter-cyclical relationship (the crisis increased tobacco smoking), possibly explained by an increased psychological stress in selected vulnerable populations.^{13–20} In the UK, for instance, the attempt rates for smoking cessation steadily declined after the onset of the economic crisis.²¹

In Italy, the crisis had dramatic socio-economic consequences: unemployment rate has increased from 6.1% in 2007, to 10.7% in 2012 and up to 12.7% in 2014. The corresponding figures for the economically active population aged <25 years were even more tragic, rising from 20.4% in 2007, to 35.2% in 2012 and up to 42.6% in 2014.²²

Whether the present economic recession influences smoking behaviour remains inconclusive, partly because published studies on the topic mainly focused on smoking prevalence, of which not much variation can be detected in the short term. Other aspects of tobacco use, e.g. changes in smoking intensity, were not considered. Consequently, previous studies were not able to characterize individuals who changed their smoking behaviours. To fill this knowledge gap, we added to our Italian surveys a few original questions, allowing us not only to understand how the financial crisis had changed smoking intensity among current smokers, but also to compare socio-economic characteristics of smokers who changed with those who kept their smoking intensity.

Methods

This study utilizes face-to-face surveys on smoking conducted annually in Italy by DOXA, the Italian branch of the Worldwide Independent Network/Gallup International Association (WIN/GIA). Participants were selected through a representative multistage sampling in all 20 regions in Italy.²³ The first stage was used to select municipalities (the smallest Italian administrative division) in all of the 20 Italian regions (the largest Italian administrative division). Taking two characteristics as criteria, region and size, we identified from 116 to 152 municipalities (according to different survey years), representative of the Italian universe of municipalities (method known as proportional stratified sample). In the second stage, an adequate number of electoral wards (each

ward corresponding to a given district of the municipality) was randomly extracted from each municipality, so the various types of more or less affluent areas of the municipality were represented in the right proportions (i.e., central and suburban districts, outskirts and isolated houses). In the third stage, individuals were randomly selected from electoral lists, within strata of sex and age group. Adolescents aged 15–17 years, not included in the electoral lists, were chosen by means of a ‘quota’ method (by sex and exact age). Field substitution was used as a preferred strategy to deal with non-response. Unavailable participants were replaced by their neighbours (living in the same floor/building/street) with the same sex and age group. During data processing, statistical weights were generated to assure representativeness of the Italian population aged 15 years and over.

For each survey year, the total sample consisted of around 3000 individuals, representative of the general Italian population aged 15 years and over in terms of age, sex, geographical area and socio-economic characteristics. For the present analysis, we considered a subsample of current smokers surveyed in the years 2012–2014. Therefore, the analysis is based on 1919 Italian smokers (641 in 2012, 616 in 2013 and 662 in 2014).

The structured questionnaire included information on demographic and socio-economic characteristics including level of education, family income and employment status. Education was categorized into low (up to middle school diploma), intermediate (high school) and high (university). Geographical area was categorized into three categories: northern (eight regions), central (four regions) and southern Italy (eight regions including islands). A specific question designed to capture the impact of the economic crisis was formulated as follows: ‘Did you reduce, increase or maintain your smoking intensity as a consequence of the recent economic crisis?’ Furthermore, the following question was asked in the 2012 survey: ‘Among dining out, cinema, charge card for cell phone, cigarettes, discotheque or other amusements, what would you give up first due to the economic crisis?’

Statistical analysis

Odds ratios (OR) and the corresponding 95% confidence intervals (CI), for increased/reduced versus not changed smoking consumption, were estimated using multinomial logistic regression models, after adjustment for the following *a priori* selected covariates: sex, age (four categories: 15–24; 25–44; 45–64; ≥65 years), education (three categories: low; intermediate; high), geographic area (three categories: North; Centre; South), and survey year (three categories: 2012; 2013; 2014). There was no multicollinearity among independent variables. All the analyses were performed with SAS, version 9.2, statistical package (SAS Institute, Cary, NC, USA).

Results

Among 1919 current smokers, 77.4% reported they had not changed their smoking habit as a consequence of the economic crisis, while 19.1% and 3.5% reported to have reduced or increased their smoking intensity, respectively (Table 1).

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