



## Research paper

## The social cost of illicit drugs use in Spain

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## ABSTRACT

**Background:** Illegal drugs consumption not only has a notable impact on the population's health, but also leads to major socio-economic costs. A significant characteristic of drug consumers is that the majority are of working age. The main aim of this study is to estimate the economic impact of drug consumption in Spain from a social perspective.

**Methods:** A cost-of-illness methodology is carried out and a distinction is made between health-related and non-health related direct costs, as well as indirect costs. Among the direct health care costs included are hospitalisations, primary and emergency care, support programmes and HIV outpatient care. Expenditure on prevention, law enforcement and research was included as direct costs falling outside of health care. Productivity losses due to premature deaths attributed to substance abuse and patient hospitalisation formed part of indirect costs.

**Results:** For 2012, the total social cost related to drug consumption in Spain was somewhere between 1,436 and 1,651 million euros. The minimum cost of this consumption represented 0.14% of Spain's GDP for that year.

**Conclusion:** The present cost estimations provide a measure of the social burden that illegal drug consumption represents for the community. When it comes to allocating resources, the obtained results quantify the potential economic returns that could be achieved from effective policies and programmes aimed at reducing the consumption of illegal drugs.

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## Introduction

The costs of illegal drug consumption represent a great burden for individuals as well as society as a whole. There are multiple consequences for drug users on a physical, psychological, professional and legal level. Relationships with families and friends are also affected. However, apart from the individual impact, society as a whole feels the negative effects of drug use on its health system, economy, culture and the security of its citizens.

To face the illegal drug consumption consequences, countries have dedicated public and private resources to implement policies towards prevention, rehabilitation, reintegration and research. In addition to these resources, one must also take into account other costs such as losses in work productivity related to morbidity and premature death. These costs are particularly relevant because the problem primarily affects those of working age.

The main objective of this article is to quantify the social costs of illegal drug consumption in Spain for 2012 and to assess the relative weighting for its different headings. In the attempt to do a sensitivity analysis, minimum and maximum values are presented for some of the cost headings considered in the estimate. Tools are needed to quantify and contextualise the severity of the problem, as illegal drug use continues to be a constant in our society and a crucial issue. An economic assessment makes even greater sense during an economic crisis. Although the budget that is spent is drastically reduced each year, the number of people in need of this support stays the same ([Government Delegation for the National Drugs Plan, 2013](#)).

A great deal of literature has attempted to study how drug consumption has an impact from an economic point of view ([Collins & Lapsley, 1991](#); [Culyer, Eaton, Godfrey, Kout-Solioutsos, & McDougall, 2002](#); [Robson & Single, 1995](#); [Rivera, Casal, Currais, & Rungo, 2012](#); [Single et al., 2003](#); [Slack, Nana, Webster, Stokes, & Wu, 2009](#)). [Collins and Lapsley \(1996\)](#) argue that the costs of illegal drug consumption and its past and present effects are equivalent to the resources allocated to consumer spending and investment, an amount which is no longer available to society. One must also consider the value of the intangible costs related to this health problem.

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Rice (1966) specified the initial methodological steps to take when estimating illness-related costs. Another point of reference for cost-of-illness studies comes from Hodgson and Meiners (1982). These studies laid down the foundations for classifying costs in general terms. A distinction is made among direct costs (health-related and non-health-related), indirect costs and those that are intangible.

According to Kopp and Ogronnik (2016) the social cost incurred by drug consumption would be two-fold: external costs and the effect on public spending. The “first”, measures the opportunity cost of the resources invested due to drug use. Here reference is being made to a loss in the quality of life, a decrease in productivity at work or premature mortality attributed to drug use. The “second”, covers the impact felt on the public spending coffers in terms of the money spent on treating, doing research on and preventing addiction, among other activities. The impact would be quantified as the opportunity cost for using public resources.

Direct costs can be defined as those resources that, if the addiction problem had not existed, would have been re-allotted to other uses. Among these are the costs of health care, prevention programmes, reintegration, re-insertion into the workforce, and judicial procedures. Indirect costs traditionally refer to gains or losses in productivity related to illness or premature death. It also involves lost production within the social environment of the addict as a result of someone having to provide informal care. This includes labour output, domestic productivity and even time taken away from leisure.

As for indirect costs, there are productivity losses due to premature deaths attributed to substance abuse and hospitalisations. Among the direct costs that could not be included due to the lack of data one finds the cost of care received in private hospitals, police costs and property damage. Also within the category of indirect costs, losses in productivity at work caused by sick leave and imprisonment are unaccounted for.

Intangible costs refer to a reduction in quality of life due to the physical or emotional suffering a person who is ill experiences alongside those who are closest to him or her. It is a complex task to allocate a monetary value to these concepts. As a result, they are left out of most illness cost analyses. Nevertheless, they should be mentioned explicitly and taken into account when it is time to articulate public healthcare interventions.

In this study, both in-and outpatient treatments for diseases incurred by drug use have been included as direct costs. Among these are support services for addicts, pharmacy, primary and emergency care and public expenditures on prevention and research. Also considered as direct costs, but outside the healthcare sector, are spending on law enforcement and General State Administration.

Another area that has not been dealt with thoroughly is losses in productivity experienced by drug-related crime victims, or those that occur through unpaid work. Intangible costs have not been estimated.

One of the pioneer works in estimating the costs associated with illegal drug consumption was done for the United States by Rice, Kelman, Miller, and Dunmeyer (1990). The authors reckon there was a total cost of 43,000 million dollars in 1985. 64.9% of this amount is attributed to indirect costs, such as hospitalisation and premature deaths. Direct costs are mostly spread out among two kinds of expenditure. Health care spending accounts for 4.4% of these, while costs incurred by the police force, judiciary and prison system represent 30.6%.

Xie, Rehrn, Single, Robson, and Paul (1998) obtain the total associated cost of illegal drug consumption in Ontario for 1992, which was 490 million Canadian dollars. 71.3% of the amount corresponded with indirect costs. Fenoglio, Parel, and Kopp (2003) estimates costs from drinking, smoking and taking illegal

substances for France in 1997. Illegal drugs generate a social cost of 2035 million euros (0.16% of the French GDP in that year). Losses in work productivity reached 930 million euros, about 45.7% of the total cost.

Gonçalves, Lourenço, and Nogueira da Silva (2015) study how the social cost of drug consumption in Portugal has evolved since the Portuguese National Strategy for the Fight against Drugs (NSFAD) was approved in 1999. The results indicate that the social costs of drugs significantly decreased (12%) in the five years following the NSFAD's approval. This reduction is as high as 18% if the period 2000–2010 is considered. This trend is mainly driven by lower indirect costs. The authors obtain a per capita social cost for drugs of €24.53 in 2010 (euros at 1999).

From the perspective of the studies promoted by state entities, one that stands out is the series of estimates developed in 1988 by Collins and Lapsley (1991) for the National Drug Strategy in Australia. In the most recent estimate (2004–2005), the total cost of the consumption of illegal drugs in Australia was 8189 million dollars (Collins & Lapsley, 2008). Another series of highly relevant studies was produced by the United States Department of Justice. The results that correspond with the latest edition, from 2007, indicate the total cost for drug consumption is 193 billion dollars (United States Department of Justice, 2011).

As for Spain, the study by García-Altés, Olle, Antoñanzas, and Colom (2002) takes on a social perspective to estimate the cost of illegal drug consumption in Spain in 1997. The most conservative estimate has a cost of about 533.7 million euros (0.07% of the PIB). Direct costs are around 75.6% of the total (65.5% health care related). Under the heading of health care costs, the amount spent on medication makes up 46% of the health care cost total. For indirect costs, the authors included losses in work productivity associated with premature death and hospitalisation.

Appendix A (Table A1) provides the cost categories used in the previous review of the literature and their weighting with respect to the GDP (Table A1). However, one should consider that these costs could not be directly comparable due to the variability among cost categories included in the studies. This variability is mainly caused by differences in the availability of information for carrying out the calculations. Moreover, they follow a range of methodologies and use varied definitions for social cost. Other factors also make it difficult to make comparisons: the availability of data, the sources and registers that need to be accessed and the different ways in which the health care system and social structure are organised in each country (Gonçalves et al., 2015).

In the second section of the article, the subject is contextualised. An analysis of recent trends in the main indicators for the drug problem in Spain is developed. The third and fourth sections provide the methodology and results obtained in each of the cost categories examined. Aggregate costs arising from the assessment are presented in section fifth. The discussion and recommendations are found in the final section.

## Overview of the main indicators related to the social cost of illegal drug consumption in Spain

In order to provide a summary of the latest trends in the main indicators related to the social cost of illegal drug consumption in Spain we use the EDADES (*Encuesta sobre Alcohol y Drogas en España*). The EDADES is a biannual survey carried out by the Spanish Observatory on Drugs. In its 2012 edition, the survey takes a representative sampling of the Spanish population between 15 and 64 years (22,128 validated questionnaires) (Spanish Observatory on Drugs, 2013).

Cannabis is the illegal substance with the highest prevalence rates in the last 12 months, followed by freebase cocaine (Fig. 1). In the period covered by the analysis (2007–2012), no variation can

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