

Clinical Study

# Has the prevalence of neck pain and low back pain changed over the last 5 years? A population-based national study in Spain

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## Abstract

**BACKGROUND CONTEXT:** No study has determined time trends of neck pain and low back pain (NP&LBP) in the 20th century in Spain.

**PURPOSE:** To estimate current 1-year prevalence of NP&LBP using data from the 2009 European Health Survey and to analyze the time trends in the prevalence of NP&LBP from 2005 to 2010.

**STUDY DESIGN:** Population-based national study.

**PATIENT SAMPLE:** A total of 51,666 subjects were finally included.

**OUTCOME MEASURES:** The 2006 Spanish National Health Survey (SNHS) and the 2009 European Health Interview Survey for Spain (EHISS).

**METHODS:** We analyzed data from the 2006 SNHS (n=29,478) and the 2009 EHISS (n=22,188). We considered the presence of NP, LBP, and both NP&LBP. We analyzed sociodemographic features, self-perceived health status, lifestyle habits, and comorbid diseases using logistic regression models.

**RESULTS:** In 2009, the 1-year prevalence was 5.2% (95% confidence interval 4.8–5.5) for NP, 7.9% (7.4–8.3) for LBP, and 10.6% (10.2–11.1) for NP&LBP. Women increased the probability of NP and NP&LBP but decreased the probability of LBP. The prevalence of all pain localizations increased with age. Not practicing exercise or being obese was associated with lower NP and higher NP&LBP. One-year prevalence of NP decreased from 2006 (7.57%) to 2009 (5.18%) (prevalence ratio [PR] 0.66, 0.60–0.72; men: 0.68, 0.61–0.75; women: 0.66, 0.60–0.72). The prevalence of LBP did not change (PR 0.93, 0.86–1.01) from 2006 (8.34%) to 2009 (7.86%). The prevalence of NP&LBP decreased from 12.53% in 2006 to 10.61% in 2009 (PR 0.81, 0.75–0.86; men: 7.73% to 6.36%, PR 0.80, 0.70–0.90; women: 17.15% to 14.69%, PR 0.81, 0.74–0.87).

**CONCLUSIONS:** The prevalence of NP and NP&LBP, but not LBP, has decreased in the last years in Spain. NP&LBP were associated with similar sociodemographic and lifestyle habits in 2009 compared with 2006. © 2013 Elsevier Inc. All rights reserved.

**Keywords:** Neck pain; Low back pain; Time trends; Health surveys

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## EVIDENCE & METHODS

### Context

Analysis of trends over time in the prevalence of medical problems for a particular population might be helpful. Significant increases or decreases may suggest changes in the population at risk, fluctuations in risk or prognostic factors, confidence or reliability of diagnosis, changes in disease classification, increased awareness, and public health measures related to the problem, among other factors.

### Contribution

In this study, the authors found that the prevalence of neck pain and combined neck and back pain appeared to decrease in Spain over the years 2006–2009. Low back pain prevalence did not appear to change.

### Implications

The observation is interesting and raises many questions concerning the many factors that influence pain syndromes and why people sometimes will or will not report specific symptoms over time. Further investigation will be equally interesting as potential causes of these findings are examined.

—The Editors

## Introduction

Both neck pain and low back pain (NP&LBP) are significant health care problems. It seems that the lifetime and point prevalence of NP are almost as high as LBP. The 1-year prevalence for NP ranges from 16.7% to 75.1% [1], whereas for LBP, it ranges from 22% to 65% [2]. The economic burden of NP&LBP involves high annual compensation costs [3,4]. Several studies investigated the point prevalence of NP&LBP in the general population in different geographical locations, for example Canada [5], Italy [6], Sweden [7], England [8], Australia [9], Africa [10], United States [11–13], and Cuba [14]. Furthermore, there is evidence that NP&LBP generally coexist with other medical conditions [15] and with depression [16,17].

Because of the economic and health care impact of NP&LBP, knowledge of point prevalence is not enough for promoting health programs in Public Health Systems. Information on temporal trends can identify subgroups of people at risk for chronic NP&LBP, evaluate public health interventions, and help to develop specific preventive actions. Nevertheless, information on temporal trends at population levels is almost nonexistent for NP&LBP. In fact, there is only one published study that has attempted to investigate time trends of NP and concurrent LBP by following the prevalence in a given geographical area [18]. This study investigated the prevalence of self-reported pain

in neck-shoulder-arm over a 16-year period and found that prevalence of NP increased between 1990 and 2002 and decreased between 2002 and 2006 in both men and women.

We have recently determined the 1-year prevalence of NP&LBP in the general Spanish population [19]. Based on the data from the 2006 Spanish National Health Survey (SNHS), we found 1-year prevalence of 19.5% for NP and of 19.9% for LBP in Spanish adults. In addition, NP&LBP were highly comorbid (12.1%). Finally, both NP&LBP were associated with worse self-reported health status, depression, and other conditions, including headache and osteoporosis. To the best of the authors' knowledge, no study has previously determined time trends of NP&LBP in the last years in Spain. The present study examines time trends in the prevalence of NP&LBP for Spanish adults using National Health Survey conducted between the period 2005 and 2010 with particular attention to gender differences.

The aims of the present study were to estimate current 1-year prevalence of NP&LBP and their association with sociodemographic factors, lifestyle habits, self-rated health status, and comorbid conditions using the data from the 2009 European Health Survey and to analyze the time trends in the prevalence of NP&LBP from the period 2005 to 2010.

## Methods

### *The 2009 European Health Interview Survey for Spain*

The European Health Interview Survey was proposed by the European Commission of the European Union Member States to create a health information system through a comprehensive and coordinated set of surveys performed in the European Statistical System under the responsibility of "Eurostat." In such a way, all European Union States would share common guidelines for modules (health determinants, health status, health care, background variables), survey design, and based on a common questionnaire. The European Health Interview Survey is to be implemented every 5 years with the first wave being made between 2008 and 2009 [20].

The 2009 European Health Interview Survey for Spain (EHISS) was conducted by the National Statistics Institute (*Instituto Nacional de Estadística*), under the aegis of the Spanish Ministry of Health and Social Affairs [21]. The EHISS is an ongoing, home-based, personal interview examining a nationwide representative sample of civilian, noninstitutionalized population aged more than 16 years and residing in main family dwellings (households) of Spain. Study subjects were selected by means of probabilistic multistage sampling, with the first-stage units being census sections and the second-stage units being main family dwellings. Details of EHISS methodology are described elsewhere [21]. In 2009, to meet the surveys' stated aim of being able to furnish estimates with a certain degree of reliability at national and regional levels, a sample of

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