The American Insomnia Survey: an epidemiology study of insomnia in subjects with various comorbidities and/or conditions

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ABSTRACT
Introduction: The prevalence of insomnia as a disorder is not well defined. Little is known about the number and patterns of night-time and daytime symptoms, their severity and chronicity, or their associations, among these features. Most epidemiological studies of insomnia have failed to do either systematically use diagnostic criteria or study insomnia subtypes (insomnia, morning tiredness, and non-restorative sleep). Non-restorative sleep defined in sufficient detail and have not documented the relative or joint effects of insomnia subtypes, for example morning/night-time insomnia symptoms as well as the disease burden of primary insomnia and comorbid insomnia have not been compared.

Methods: The American Insomnia Survey (AIS) telephone questionnaire (approximately 40 minutes) has been administered to 11812 respondents from the HealthCore Integrated Research Database consisting of a representative sample of subscribers from 14 geographically dispersed US health plans, which allows responses to be linked with medical and pharmacy claims data. The aim is to investigate associations between insomnia and relevant outcomes, including reported daytime insomnia, accidents, injuries, lost productivity, and healthcare utilization. We also examine developmental and work-related correlates of insomnia in subsamples defined by presence of comorbidities identified by ICD-9 codes on medical claims, including COPD, asthma, hypertension, obstructive sleep apnea, neuropsychiatric pain, and diabetes, and GERD.

Results: This presentation describes AIS methods, instrument development and rationale for choice of scales within the instrument, validation against clinic diagnostic interviews, and planned analyses. Overall, and for each comorbidity, the relationship of comorbidity prevalence and incremental predictive effects of insomnia and its subtypes on functioning among patients. Analyses include examination of diagnostic thresholds for insomnia based on symptoms, symptom severity, and daytime impairment. The study also includes specific analyses of respondents aged over 65 years, a clearly identifiable population with an increased prevalence of insomnia.

Conclusions: The AIS is a relatively complete, large-scale, rigorous survey designed to examine the prevalence and impairments associated with insomnia and insomnia subtypes in the USA. First results are reported at the satellite symposium entitled “THE AMERICAN INSOMNIA SURVEY: METHODS AND RESULTS”, Tuesday 15 November 2009, IASAC 2009, São Paulo, Brazil.

INTRODUCTION

While insomnia is a considerable health burden, the prevalence of insomnia as a disorder is not well described, neither in the general population, nor in populations with medical comorbidities, leading to large variations in prevalence estimates.1,2 The relative burden of primary insomnia versus comorbid insomnia is also poorly understood. Little is known about the number and patterns of night-time and daytime insomnia symptoms, their severity and chronicity, or their associations, among these features. Insomnia is generally characterized by one or more of the three primary night-time symptoms – problems with sleep onset, sleep maintenance (night-time waking) – and next-day impairment. The study advances our understanding of insomnia by examining subtypes of sleep disorders, and the impact of insomnia severity on quality of life. Methods for addressing this work are described here. The study has been conducted in the USA via telephone survey. The sampling frame is the HealthCore Integrated Research Database consisting of approximately 18 million commercial health plan subscribers. A probability sample of subscribers was selected to create a stratified sample representative of the US population in terms of census region, urban and rural residence, age and gender (Figure 1). Probability samples of subscribers with selected comorbid conditions have been over-sampled in order to provide sufficient sample size for targeted analyses of each condition.

OBJECTIVES

Primary

To evaluate the prevalence of insomnia according to three diagnostic systems, insomnia symptoms, and symptom clusters (e.g. problems with sleep onset, sleep maintenance, next-day impairment, and non-restorative sleep associated with perceived health burden).

To characterize specific symptoms and symptom clusters, demographic, comorbidity, treatment patterns, and sleep habits in people with insomnia.

METHODS

Enrollment/sampling

The study has been conducted in the USA via telephone survey. The sampling frame is the HealthCore Integrated Research Database consisting of approximately 18 million commercial health plan subscribers. A probability sample of subscribers was selected to create a stratified sample representative of the US population in terms of census region, urban and rural residence, age and gender (Figure 1). Probability samples of subscribers with selected comorbid conditions have been over-sampled in order to provide sufficient sample size for targeted analyses of each condition.

Healthcore Disability Scale

Quick Inventory of Depressive Symptomatology, modified

VIII. Family History

VIII. Occupations/Profession/Customers

Multiple sclerosis

VIII. Soft tissue injury

VIII. Tumor

RESULTS

Enrollment of respondents is complete.

Data analysis and presentation are in progress.

SUMMARY

The AIS compares insomnia disorder prevalence data according to three commonly used diagnostic systems.

The AIS provides population estimates of the number and patterns of night-time and daytime insomnia symptoms in the general population, their severity and chronicity, and associated work-related outcomes in the general population. Additionally, AIS provides an estimate of the overall burden of insomnia with and without comorbidity.

The performance of the assessment of insomnia by examining subtypes (sleep-onset, maintenance, and next-day impairment in wakefulness and work productivity) and related outcomes and their relative joint effects on behavioral, health, and economic outcomes.

The AIS examines the relative burden of primary insomnia versus comorbid insomnia, and the impact of insomnia symptom severity thresholds on burden.

REFERENCES


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