

Editorial

Insomnia and healthcare-seeking behaviors: impact of case definitions, comorbidity, and sociodemographic and cultural factors

The public health significance of insomnia has received increased attention in the last two decades, as reflected by the numerous worldwide epidemiologic investigations documenting its prevalence, course, risk factors, and long-term outcomes. Cross-sectional studies have strengthened the evidence that insomnia is a prevalent health problem in the general population, and longitudinal studies also have more recently documented the persistent course of insomnia and its negative outcomes on mental (e.g., depression), physical (e.g., hypertension), and occupational health (e.g., disability) [1].

The paper by Hsu et al [2] in this issue of *Sleep Medicine* provides additional insight into one of several important public health aspects of insomnia, that is, healthcare-seeking behaviors. Using insurance claims of over 900,000 enrollees of the National Health Insurance program in Taiwan, the authors examined the annual rates of outpatient and inpatient consultations for insomnia from 2002 to 2009. Point prevalence estimates of healthcare-seeking behaviors varied between 2.5% and 4.2% annually, with an increasing trend over the 8-year period, whereas incidence rates fluctuated between 1.3% and 1.6% for the same interval. Significant associations were observed between increased use of healthcare services for insomnia and female gender, middle and older ages, and the middle socioeconomic status, all of which adding to the knowledge base on healthcare-seeking behaviors. Although there were many strengths of this study, such as its use of a longitudinal design with repeated assessments, the large population-

based sample, and the standard International Classification of Diseases Ninth Revision insomnia diagnostic codes, the findings must be cautiously interpreted in light of some methodologic caveats. Some of the most notable caveats were the case definition of insomnia, the lack of information regarding comorbid disorders, and the various determinants of healthcare-seeking behaviors.

Case definitions of insomnia and comorbidity

Using healthcare-seeking behaviors as a proxy indicator of insomnia is likely to yield different estimates from actual prevalence and incidence rates of insomnia that would be derived from a direct assessment of this condition. Thus, it is important not to confuse prevalence and incidence rates of healthcare-seeking behaviors vs actual insomnia. In this regard, the data reported by Hsu et al [2] are significantly lower than those typically reported in epidemiologic surveys of insomnia [3-5]. A plausible explanation for this discrepancy is that the majority of individuals with insomnia do not seek professional treatment, and even with National Health Insurance coverage one could argue that many individuals still may not seek insomnia treatment for various reasons. Some of the common barriers to insomnia treatment are the perception that insomnia is not a real problem, the lack of awareness that treatment is available, or simply the stigma that is associated with insomnia. For example, an individual's beliefs about the causes and the consequences of his or her sleep problems [6] as well as his or her own family's values about illness (e.g., "according to my family, anyone who needs counseling is weak") [7] can enhance or prevent someone from seeking professional help. Further the belief that insomnia predominantly is due to a biologic factor may be more likely to lead someone to seek a medically

based treatment, whereas a religious belief that insomnia is the result of God's will may be likely to lead to quite different courses of actions. Therefore, caution is warranted when interpreting prevalence and incidence rates using insurance claims derived from an administrative dataset.

Another important issue to document when tracking healthcare-seeking behaviors for insomnia is the presence of coexisting psychiatric or medical disorders. Although this information was not reported in the report by Hsu et al [2], it would have been valuable to ascertain if seeking healthcare was specifically initiated for insomnia or for a comorbid condition with overlapping symptoms (e.g., anxiety, depression). Because insomnia often is comorbid with other psychiatric (e.g., depression) and medical conditions (e.g., pain) and because such comorbid conditions can influence healthcare-seeking behaviors [8], it is essential for epidemiologic studies to distinguish cases of insomnia disorder with and without comorbidities. This research would be particularly interesting to help determine the extent to which individuals with insomnia actually seek treatment for sleep or for a coexisting disorder.

Determinants of healthcare-seeking behaviors

Substantial evidence exists on the role of demographic and psychosocial factors as important determinants of healthcare-seeking behaviors. In general, women, middle-aged and older individuals, and those with higher education and socioeconomic statuses are more inclined to seek healthcare services, whereas individuals from ethnic minority groups are less likely to seek treatment [9,10]. The paper by Hsu et al [2] suggests that these associations also are present between insomnia and healthcare-seeking individuals in Taiwan. One interesting and unexpected finding was the decline in those seeking healthcare among adults ages 70 years and older, which

might suggest that older adults may have normalized sleep difficulties as they have grown older, have grown accustomed to sleeping poorly, or have become more preoccupied with other health problems that may be more life-threatening than insomnia.

Hsu et al [2] found that those who repeatedly sought healthcare more frequently were women. This finding is in line with research suggesting that there are gender differences in the way women and men perceive sleep disturbances and how they react to such difficulties [11]. In general women are more likely to rely on their social network to get advice for sleep difficulties, while men are more likely to receive drugs and assistance in interpreting their symptoms from a lay referral system [10].

Psychosocial factors such as one's perception of self-efficacy to cope with insomnia also may be an important determinant of healthcare-seeking behaviors. Individuals with better coping skills may rely more on their own resources to cope with sleep difficulties, while those with less efficient coping skills will more readily seek outside help. Demographic and psychosocial factors not only impact whether or not an individual seeks healthcare services, but also impacts what types of treatments are initiated. For instance, older adults are more inclined to seek traditional medical treatment for insomnia, while younger adults and women are more receptive to complementary and alternative therapies (e.g., acupuncture, herbal medicines) [12-13]. Daley et al [14] found that individuals with insomnia spent nearly 10 times the amount of money on alcohol to promote sleep than healthy sleepers. Further, incident insomnia was associated with a 2.87 times greater likelihood to initiate natural product use [15]. Hsu et al [2] did not report the type of treatment received for insomnia; however, one could speculate that alternative therapies for insomnia may be more frequently used in Taiwan or other Asian countries than prescribed medications. Taken together, rates of healthcare-seeking individuals should be interpreted with

caution, as they most likely are influenced by psychosocial, sociodemographic, cultural, and economic factors, all of which tremendously vary around the world.

Hsu et al [2] should be commended for their longitudinal study and for their contribution of new information regarding healthcare-seeking behaviors for insomnia in Taiwan. Future research is warranted to expand on these findings, to more broadly document all forms of therapies initiated for insomnia (e.g., prescribed vs over-the-counter medications vs complementary and alternative therapies vs self-help), and to identify the determinants of healthcare-seeking behaviors as well as the reasons why some individuals with insomnia do not seek help. Information regarding baseline health status and the type of treatment and products used to alleviate sleep problems is crucial. In addition, the critical moment when someone decides to initiate therapy also would help to characterize the natural history of insomnia and the potential course modifiers, which ultimately would help to improve treatment and prevention efforts.

Charles M. Morin^{*}, PhD and Denise C. Jarrin, PhD

Université Laval, Québec City, Québec, Canada

^{*}Corresponding author. Address: Université Laval, École de psychologie, Pavillon Félix-Antoine Savard, 2325, rue de Bibliothèques, Québec, QC G1V 0A6.

E-mail address: cmorin@psy.ulaval.ca (C.M. Morin).

Acknowledgments

Preparation of this manuscript was supported by the Canadian Institutes of Health Research (MOP42504) and by the National Institutes of Health (MH078188 and MH60413).

References

- [1] Morin CM, Jarrin DC. Epidemiology of insomnia: prevalence, course, risk factors, and public health burden. *Sleep Med Clinics* [in press].
- [2] Hsu YW, Ho CH, Wang J, Hsieh KY, Weng SH, Wu MP. Longitudinal trends of the healthcare-seeking prevalence and incidence of insomnia in Taiwan: an 8-year nationally representative study. *Sleep Med* [in press].
- [3] Morin CM, LeBlanc M, Daley M, Gregoire JP, Merette C. Epidemiology of insomnia: prevalence, self-help treatments, consultations, and determinants of help-seeking behaviors. *Sleep Med* 2006;7:123-30.
- [4] Ohayon MM. Epidemiology of insomnia: what we know and what we still need to learn. *Sleep Med Rev* 2002;6:97-111.
- [5] Ohayon MM, Reynolds CF 3rd. Epidemiological and clinical relevance of insomnia diagnosis algorithms according to the DSM-IV and the International Classification of Sleep Disorders (ICSD). *Sleep Med* 2009;10:952-60.
- [6] Clever MN, Bruck D. Comparisons of the sleep quality, daytime sleepiness, and sleep cognitions of Caucasian Australians and Zimbabwean and Ghanaian black immigrants. *South African J Psychol* 2013;43:81-93.
- [7] Barksdale CL, Molock SD. Perceived norms and mental health help seeking among African American college students. *J Behav Serv Res* 2009;36:285-99.

- [8] Aikens JE, Rouse ME. Help-seeking for insomnia among adult patients in primary care. *J Am Board Fam Pract* 2005;18:257-61.
- [9] Jimenez DE, Cook B, Bartels SJ, Alegria M. Disparities in mental health services use of racial and ethnic minority elderly adults. *J Am Geriatr Soc* 2013;61:18-25.
- [10] Ettorre E, Klaukka T, Riska E. Psychotropic drugs: long-term use, dependency and the gender factor. *Soc Sci Med* 1994;39:1667-73.
- [11] Suarez EC. Self-reported symptoms of sleep disturbance and inflammation, coagulation, insulin resistance and psychosocial distress: evidence for gender disparity [published online ahead of print March 6, 2008]. *Brain Behav Immun* 2008;22:960-8.
- [12] Pearson NJ, Johnson LL, Nahin RL. Insomnia, trouble sleeping, and complementary and alternative medicine analysis of the 2002 National Health Interview Survey. *Arch Intern Med* 2006;166:1775-82.
- [13] Ng TP, Tan CH, Kua EH. The use of Chinese herbal medicines and their correlates in Chinese older adults: the Singapore Chinese longitudinal aging study. *Age Ageing* 2004;33:135-42.
- [14] Daley M, Morin CM, LeBlanc M, Grégoire JP, Savard J. The economic burden of insomnia: direct and indirect costs for individuals with insomnia syndrome, insomnia symptoms, and good sleepers. *Sleep* 2009;32:55-64.
- [15] Morin CM, LeBlanc M, Ivers H, Bélanger L, Jarrin DC. Monthly fluctuations of insomnia symptoms in a population-based sample. Under review.