EDITORIAL

Working with Poor Sleep

Commentary on Lallukka et al. Sleep and sickness absence: a nationally representative register-based follow-up study. *SLEEP* 2014;37:1413-1425.

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In addition to medical causes, poor sleep is a product of the multiple demands of our hectic 24-hour lives.¹⁻⁵ How is it possible to combine, in a 24-hour time cycle, an 8 hour job, commuting time, family tasks, social time with friends, keeping up-to-date with news and other information, staying in touch with family...and sleeping 7 to 8 hours? This is a difficult question. Nevertheless, it is well recognized that there is a reciprocal association between the quantity of sleep and the quality of work and of life at work.⁶⁻⁹ It is also known that insomnia, sleep apnea, and hypersomnia can influence sickness absence.¹⁰⁻¹⁷

Poor sleep can be thought of as a “disease” of society. Rates of poor sleep have increased with urbanization, noise, shift work, increasing connection time and, especially in young adults and adolescents, with the increasing use at night of mobile phones and the internet.^{5,6,18-21} Nevertheless, although poor sleep may indeed be a “disease” of society, almost 10% of the general population complains of chronic insomnia independent of their jobs or environmental conditions.^{18,22-24}

In this issue of *SLEEP*, Lallukka and colleagues stress the impact of poor sleep on sickness absence in 3960 Finnish workers.²⁵ In a Finnish social insurance cohort observed during a 7.2-year follow-up period, the researchers found significant associations between insomnia-related symptoms, early morning awakening, being more tired during the daytime than other people of the same age, use of sleeping pills, probable sleep apnea, reporting that sleep duration varied between seasons, and sickness absence.

Lallukka et al. proposed an optimal sleep duration (7.76 h for males and 7.63 for females) that was associated with a minimum duration of sickness absence (5.93 days per year for males and 7.64 for females). Participants who reported sleeping for 11 hours or more had an average of 25.17 days of sickness absence for males and 19.59 days for females; those who slept less than 5 hours had 14.83 and 13.09 days of sickness absence, respectively.

Sickness absence is a major economic endpoint, and the impact of poor sleep on sickness absence needs to be a subject of future sleep research.¹⁰⁻¹⁷ In the world of work and economy, the ability of operators to stay awake at work is considered as a key human factor to avoid work accidents, enhance productivity,

and facilitate quality of life at work.^{4-6,8,9} Poor sleep may negatively affect productivity and relationships at work, increase the risk of traffic and work accidents, and increase sickness absence.^{10-14,26} However, sickness absence may be a reflection of many other factors than just poor sleep; moreover, it is difficult to differentiate the effects of poor sleep per se from those of chronic diseases that may be associated with poor sleep, or work conditions that may impact on sleep, fatigue, and mood.

It is now well recognized that the most common sleep disorders (sleep apnea, insomnia, and hypersomnia) are associated with chronic comorbidities: cardiovascular diseases, accidents, psychiatric disorders.²⁷⁻²⁹ In recent years, research has mainly focused on the association between too little or too much sleep with associated comorbidities that can affect sickness absence: sleeping too little can affect memory and immunity and jeopardize safety.³⁰⁻³⁴ Chronic short sleep duration (< 6 hours) has been associated with an increased risk of obesity, diabetes, hypertension, and other cardiovascular diseases.^{30,35-40} Acute sleep deprivation (defined as sleeping 0% to 50% of a normal 8-h night's sleep) contributes to increased inflammation and disturbs the immunological response.^{41,42} All of these health conditions may themselves impact on sick leave.

Twenty percent of the work force around the world works shifts or at night, and it is well established that these work conditions affect the biological clock and the quantity and quality of sleep.⁴³ Night worker's sleep, on average, one hour less than daytime workers. It impacts on sleepiness and increases the risk of cardiovascular disease and of some cancers.^{44,45} Shift work and night work are associated with a higher sickness absence rate and an increased risk of traffic and work accidents.⁴⁶

Despite some encouraging data, relatively little research has assessed the societal costs of sleeping habits and sleep disorders.^{10-14,16} Interest has largely focused on the cost of hypnotics because of the global difficulty that industrialized countries have in adequately financing their social security systems. The adverse costs of poor sleep on the economy are not known. It has been shown that insomnia, sleep apnea and hypersomnia may increase accidents, impair quality of life, and increase sickness absence.^{10-14,16} There are also some older reports of catastrophic accidents associated with poor sleep.⁴⁷ However, there is a global lack of knowledge on the effects of poor sleep on productivity, creativity, team management, professional relationships, career management, professional educational ability, and occupational quality of life.

More data in these areas would be helpful, not only for the management of human factors at work, but also for the prevention of sleep and health disorders. Social and professional data on sleep and work may help multidisciplinary experts to build

Submitted for publication July, 2014

Accepted for publication July, 2014

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new work models that take advantage of human biological clock rhythms to prevent accidents, work absence, or sleep disorders occurring as a result of irregular and extended work schedules.

CITATION

Leger D. Working with poor sleep. *SLEEP* 2014;37(9):1401-1403.

ACKNOWLEDGMENT

The author thanks Dr. Karen Pickett, PhD, for reviewing the English wording of this editorial.

DISCLOSURE STATEMENT

Professor Leger has received funding or has been the principal investigator in studies sponsored by Sanofi-Aventis, Merck, Vanda, Actelion, Bioproject, Philips, Resmed, and Vitalaire.

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