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# Complaints of insomnia in different occupations

by Markku Partinen, MD, Leena Eskelinen, MA, Kaija Tuomi, LSocSc<sup>1</sup>

PARTINEN M, ESKELINEN L, TUOMI K. Complaints of insomnia in different occupations. *Scand J Work Environ Health* 10 (1984) 467—469. Complaints of insomnia were inquired about in a questionnaire survey of 6 268 persons (2 801 men, 3 467 women, mean age 50.5 years, range 45—57 years) in 40 different occupational groups. Among bus drivers 18.9 % complained of having rather or very much difficulty falling asleep. Among female cleaners, male teachers, male directors, and male physicians the respective percentages were 18.8, 18.0, 3.7, and 4.9. Disturbed nocturnal sleep was complained of the most often by male laborers (28.1 % waking up at least three times a night), female cleaners (26.6 %) and female hospital aides (26.4 %). Disturbed nocturnal sleep was rare among male physicians (1.6 %), male directors (7.4 %), female head nurses (8.9 %), and female social workers (9.4 %). Complaints of waking up too early in the morning were the most common among female laborers (13.2 % often or always), male construction workers (9.1 %), and female cleaners (8.4 %). They were rare among male physicians (1.6 %), male directors (1.8 %), nurses in outpatient wards (1.2 %), and female bathers (2.0 %). Sleeping pills were used the most frequently by male gardeners (7.1 % were frequent or habitual users), female social office workers (5.8 %), and male construction workers (5.4 %). Some aspects of work which could explain the differences are discussed.

*Key terms:* sleep disorders.

Irregular work times, shift work, lack of sleep, insomnia, and specific sleep disorders, such as narcolepsy or sleep apnea syndrome, may reflect harmfully on alertness at work. In this study we have studied the complaints of insomnia among workers in different occupations.

## Subjects and methods

The study was a part of a large epidemiologic survey concentrating mainly on the grounds for the retirement age in municipal occupations. The base population consisted of 7 344 adult municipal employees in 40 different occupations. There were 2 801 men (mean age 50.5 years, range 45—57 years) and 3 467 women (mean age 50.4 years, range 45—57 years). There were some clearly female occupations (nurse, cleaner, etc) and some nearly pure male occupations (bus driver, fireman, etc). No significant differences existed in the distributions of age between the occupations.

A postal questionnaire study was carried out to measure various health-related variables. The baseline characteristics of the study have been documented in detail elsewhere (1). The response rate was 85.3 %. All retired and unemployed persons were excluded, and the responses of 6 268 persons were used in these analyses.

As concerned difficulties to get to sleep, the respondents were asked to rate, on a five-point scale, whether they generally fell asleep "very easily," "rather easily," "not so easily but not with difficulty," "with rather much difficulty," or "with much difficulty." They were asked if they usually slept "without waking up at night," "with waking once during the night," "with waking two times a night," "with waking three to four times a night," or "with waking up several times a night with disrupted nocturnal sleep." They were asked whether, in the near past they had awakened too early in the morning without being able to fall asleep again "ever," "rather rarely," "sometimes," "rather often," or "often." They were also asked whether they used sleeping pills "never," "sometimes," or "often or always."

## Results

Having difficulty falling asleep was as common among the women (12.2 %) as among the men (12.1 %). The occupations in which the complaint was the most common or the rarest are listed in table 1. Difficulty falling asleep was complained of frequently by male bus drivers, female cleaners, and male teachers.

Disturbed nocturnal sleep (waking up usually at least three times a night) was complained of by 17.5 % of all women and 15.7 % of all men. The occurrence of disturbed nocturnal sleep in some occupations is shown in table 2.

Waking up too early in the morning without being able to fall asleep again was complained of nearly as

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**Table 1.** Occupations for which the complaint of rather or very much difficulty falling asleep was frequent or rare.<sup>a</sup>

Complaint frequent			Complaint rare		
Occupation	Number of subjects	Percentage with complaint	Occupation	Number of subjects	Percentage with complaint
<i>Males</i>					
Bus drivers	64	18.9	Directors	162	3.7
Teachers	78	18.0	Physicians	61	4.9
Mental health nurses	59	17.4	Electricians	163	8.5
Laborers	89	15.7	Motor mechanics	90	8.9
<i>Females</i>					
Cleaners	202	18.8	Head nurses	102	7.8
Construction workers	93	15.1	Social workers	85	8.2
Dentists	81	14.8	Nurses in outpatient wards	260	8.2
Practical nurses	277	14.4	Mental health nurses	96	9.4

<sup>a</sup> Among the total population the complaint was reported by 12.1 % of the men and 12.2 % of the women.

**Table 2.** Occupations for which the complaint of waking up at least three times per night was frequent or rare.<sup>a</sup>

Complaint frequent			Complaint rare		
Occupation	Number of subjects	Percentage with complaint	Occupation	Number of subjects	Percentage with complaint
<i>Males</i>					
Laborers	89	28.1	Physicians	61	1.6
Gardeners	98	23.5	Directors	162	7.4
Carpenters	145	22.2	Teachers	78	7.8
Construction workers	201	20.9	Mental health nurses	69	12.8
<i>Females</i>					
Cleaners	202	26.6	Head nurses	102	8.9
Hospital aides	239	26.4	Social workers	85	9.4
Construction workers	93	26.1	Ward nurses	170	9.4
Kitchen helpers	184	25.9	Dentists	81	10.0

<sup>a</sup> Among the total population the complaint was reported by 15.7 % of the men and 17.5 % of the women.

**Table 3.** Occupations for which the complaint of waking up too early without being able to fall asleep again (often or always) was frequent or rare.<sup>a</sup>

Complaint frequent			Complaint rare		
Occupation	Number of subjects	Percentage with complaint	Occupation	Number of subjects	Percentage with complaint
<i>Males</i>					
Construction workers	201	9.1	Physicians	61	1.6
Laborers	89	8.1	Directors	162	1.8
Construction supervisors	185	7.6	Electricians	163	1.9
Gardeners	98	7.3	Carpenters	145	2.1
<i>Females</i>					
Construction workers	93	13.2	Nurses in outpatient wards	260	1.2
Cleaners	202	8.4	Bathers	154	2.0
Gardeners	57	7.1	Ward nurses	170	2.3
Kitchen helpers	184	6.5	Domestic helpers	346	2.9

<sup>a</sup> Among the total population the complaint was reported by 4.9 % of the men and 4.5 % of the women.

often by women (4.5 %) as by men (4.9 %). Early morning awakening was common among female and male construction workers (table 3).

According to the subjects' responses sleeping pills were used often or always by 2.3 % of the women and 2.9 % of the men. They were used the most frequently by male gardeners (7.1 % were frequent or habitual users), female social office workers (5.8 %), and male construction workers (5.4 %). Female mental health nurses used sleeping pills less than women

in other types of nursing. Of female mental health nurses 8.2 % had used sleeping pills at least sometimes, while the corresponding percentage for other female nurses was 19.9 %.

## Discussion

In this study clear differences in the occurrence of insomnia were observed between various occupations.

This finding differs from those of a recent study in the Houston Metropolitan Area of the United States (2). In that American survey the questions were posed in a very similar way, but the classification of occupations into only three main groups (office and sales, skilled and unskilled, housewife and none) may have obscured possible differences.

The differences in the occurrence of sleeping disturbances can be explained partly by work times. For example transport workers, construction workers, laborers, and kitchen helpers start their workdays usually early in the morning. Problems may arise if a worker is, eg, a so-called evening-type person or a long sleeper. On the other hand, some workers may tend to go to bed for some reason too early in the evening, and they may thus have difficulty to fall asleep. The amount of physical activity and the psychological factors at work may explain some findings. In our preliminary analyses disturbed nocturnal sleep was associated especially with physically heavy work, while difficulty falling asleep and early morning awakening were complained of proportionally more often by workers with mental strain. The results of these analyses will be presented later in more detail.

The results of this study indicate that occupation should be taken into consideration when the reasons for insomnia are studied in clinical practice or in epi-

demologic studies. In some occupations sleeping disturbances seem to correlate with work conditions, while in some occupations sleeping disturbances seem to be associated with work capacity, economic status, or other variables. Why such differences in sleep disturbances exist between occupations is an interesting question. One explanation could be that there has been some "natural" selection as concerns the vulnerability of the sleep-wake cycle of the workers in different occupations. The study of different factors associated with the sleep-wake cycle in various occupations is important because sleep is necessary for everyone, and disturbed sleep or lack of sleep may contribute to poor work capacity and to risk of accidents at work.

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