

Tired workers

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Many adults are “time crunched,” juggling the competing demands of work, personal and family responsibilities. Almost half of Canadians aged 15 and over feel they are often not able to finish what they had set out to do each day; one-third feel constantly under stress trying to get things done, and worry that they have taken on more than they can handle. Reflecting the time crunch, some 44% of Canadian adults say they cut back on their sleep to find enough time to meet their waking commitments (Frederick, 1993). And whether they are cheating themselves of sleep or not, almost one-quarter of adults have trouble sleeping when they do get to bed (Tait, 1992).

Given these figures, some writers have concluded that the workplace is full of people so sleep-deprived they can scarcely function.¹ But in 1991, the majority of Canada’s workers (59%) said they “never” had trouble staying awake when they wanted to, while most of the rest admitted they were “sometimes” sleepy. In fact, only 4% of working Canadians aged 15 to 64 – about 500,000 people – complained they had trouble staying awake “most of the time.” This article, which uses data from the 1991 General Social Survey, looks at these workers and then briefly explores a few factors that may be related to their drowsiness.

Defining the problem

For all the attention paid to the issue of falling asleep on the job – media stories about dozing truck drivers or exhausted air traffic controllers – there is little information in the public domain about the magnitude of the problem. This is partly because much of the research has dealt with the physiological or neurological aspects

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of tiredness, and the quantitative analysis published has often focused on shift workers. Furthermore, many studies implicitly assume that anyone who loses sleep will, by definition, be drowsy and less alert. By this reckoning, close to 20% of the workforce could be described as fatigued.² However, lack of sleep is not the only cause of daytime sleepiness; many other things can induce it, including excessive warmth, boredom, or performing a demanding but uninteresting task.³ Therefore, this article measures tiredness based on the respondents’ assessment of their drowsiness during waking hours. This measure captures the frequency with which people find it *difficult to stay awake when they want to be awake*, and produces a much lower estimate of the number of workers who may be falling asleep on the job (see *Data source, definitions and limitations*).

One in 25 workers chronically tired

At 4%, the proportion of the workforce afflicted with chronic tiredness may be smaller than many people have thought. However, tiredness contributes to declining alertness and deteriorating ability to solve problems, thereby increasing the chances of making errors or having accidents. The safety issues raised by sleepiness at work are thus readily apparent, especially in occupations where the consequences of a mishap could be serious.⁴

However, drowsiness did not seem to be more common in some jobs than in others: about 4% of all workers, regardless of occupation, were chronically tired. Minor variations between different major occupational groupings – for example, services (6%) and clerical and sales jobs (3%) – were not statistically significant. Nor was any particular industry notable for a

large concentration of chronically tired workers; in fact, the only industry that differed significantly from the 4% average was manufacturing, which reported a rate of slightly less than 3%. Interestingly, people not working the traditional hours of “9-to-5” were no more likely than those with a regular daytime schedule to suffer chronic tiredness. Nor was tiredness more common among full-time than among part-time workers.

Even though they are more likely to be responsible for most household duties, working women did not complain of chronic tiredness any more than men did.⁵ Having children in the household did not increase the likelihood of being tired; and neither older (45 to 64) nor younger (15 to 24) workers were more likely than others to report frequent bouts of daytime sleepiness.⁶

Why are workers tired?

The lack of any significant variation in the rates of chronic tiredness across the basic demographic and labour market variables suggests that workers’ sleepiness may not stem primarily from something endemic to the job. The question then is, “Does the personal situation of workers have a greater impact on chronic tiredness than the jobs they hold?” More revealing information results from comparing selected personal characteristics of the 500,000 chronically tired workers with the remaining 11.1 million members of the workforce.⁷

Of course, many factors other than those identified in this study probably influenced these workers’ sleepiness; for instance, frequency of physical activity, smoking and drinking habits, or use of medication. The data cannot show if the tiredness is the result or the cause of the problem. Nevertheless, the factors described here merit discussion.

Data source, definitions and limitations

This study uses data from the 1991 General Social Survey (GSS), which gathered information about a variety of health-related topics such as existing health problems, disabilities, visits to medical professionals, hospitalization, use of medication, level of physical activity, smoking and drinking habits, stress, and work environment. The sample of 11,900 households was evenly distributed over the 12 months of 1991 and data were collected every month to offset seasonal variations in the information provided (for example, the amount of physical activity reported increases in the summer).

One of the questions asked respondents how often they had trouble staying awake when they wanted to stay awake – “never,” “sometimes” or “most of the time.” Workers who answered “most of the time” are identified as *chronically tired*. Because the assessment of drowsiness is so personal, only non-proxy responses – that is, respondents who answered for themselves and not on behalf of another household member – are used in the analysis. Non-proxy responses accounted for 99% of the sample; the estimated size of the workforce aged 15 to 64 using only non-proxy responses was almost 12.4 million.

Sample sizes were sometimes too small to produce a reliable estimate, so categories were often combined (for example, regular night shift and rotating shift; construction industry and transportation industry). Also, in a number of cases, differences between two estimates – for example, rates of chronic tiredness across industries – were not statistically significant; that is, it is not

known whether the disparities were real or distortions caused by the sample size.

Workers: adults aged 15 to 64 who were employed during the week before the survey (includes paid workers and the self-employed)

Chronically tired: workers who reported having trouble staying awake when they wanted to “most of the time.” Synonyms used in this article are tired, drowsy, sleepy or daytime sleepiness.

Limitations

The question on frequency of sleepiness does not explicitly ask respondents if they had “trouble staying awake” at work. However, a worker is more likely to remember dozing at work, when staying alert is important, than drifting off during the 11 o’clock news. Furthermore, if people find themselves nodding off unwillingly “most of the time,” such drowsiness is likely to spill over into the workplace.

Another question to address is the validity of a self-assessed rating of sleepiness; in other words, are people who think they are sleepy, actually sleepy, and therefore a potential hazard to themselves or others? A 1994 study (Gillberg, Kecklund and Åkerstedt) shows that self-assessment successfully predicts deteriorating performance due to sleepiness. Furthermore, as the authors observe, self-assessment of sleepiness is the only information available when a worker must decide whether to stop working to avoid accidents or mistakes. This is especially true of unsupervised jobs.

Tired workers worry more

In 1991, chronically tired workers averaged seven hours of sleep a night, no less than that reported by other workers. However, they were more likely to have trouble getting to sleep or staying asleep – 30% versus 19% – and they were less likely to describe their sleep as refreshing “most of the time” – 57% versus 76%.⁸

The first question to ask is whether a child might be preventing the

worker from sleeping well. However, only half of tired workers had children at home, and of these working parents, just 41% had a child under six. Almost the same portrait can be drawn of non-drowsy workers.

On the other hand, chronically tired workers were more likely to describe their lives as “very stressful”: 14% compared with 8% of all other workers.⁹ Part of this stress may have been attributable to work, since 51%

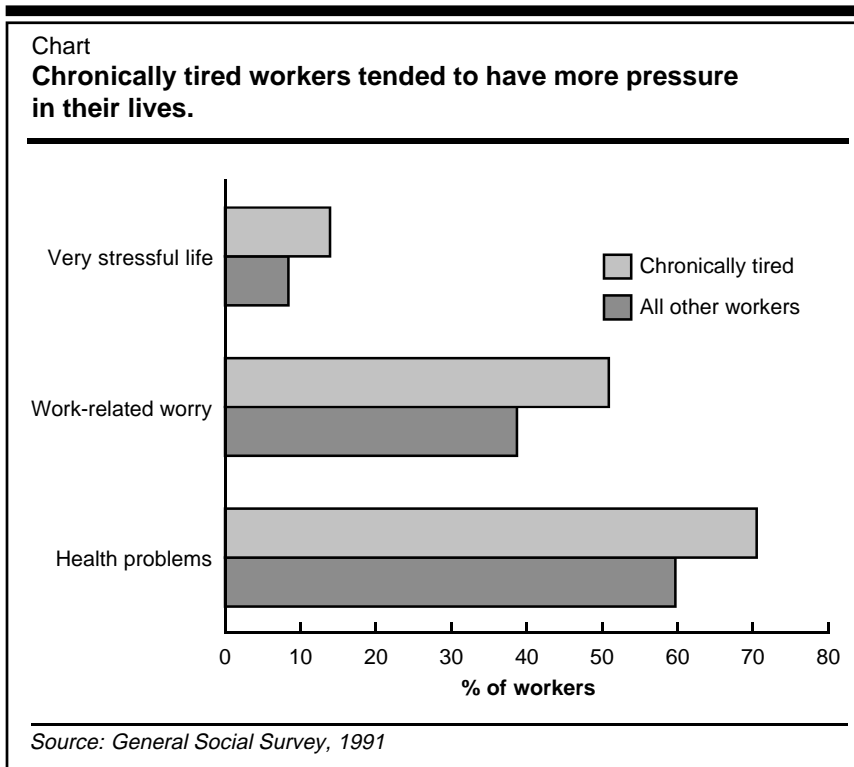
of drowsy workers were worried about something on the job, versus 39% of other workers (Chart). Tired men were the biggest worriers, with 60% of them fretting about work compared with only 40% of non-drowsy men; tired women, at 42%, were no more likely than other employed women to report any work-related worry.

By far the biggest concern, cited by 67% of chronically tired worriers, was too many demands at work or too many hours of work.¹⁰ A distant second was poor interpersonal relations, followed by threat of layoff or job loss, harassment and/or discrimination, and risk of accident or injury. Worriers in the rest of the workforce were plagued by these concerns in about the same proportions, with the exception of those who cited “poor interpersonal relations.” Trouble with people at work bothered only 29% of non-drowsy workers, compared with 45% of chronically tired workers.

Poor health more prevalent among tired workers

Workers who had trouble staying awake did report more health problems than other workers – 71% compared with 60%. Despite their higher reported stress levels, though, the percentage of drowsy workers suffering from stress-related medical conditions – such as high blood pressure, recurring migraines, or ulcers and other digestive problems – was no different from that reported by the rest of the workforce. They were, however, twice as likely to have been diagnosed with asthma (18% versus 9%).

Although their health was poorer, chronically tired workers did not take significantly more sick leave than other workers. About 58% had missed work in the previous 12 months because of illness or injury, compared with 50% of non-drowsy workers. Most workers taking sick leave, tired or not, booked off for five days or less.



Tired workers believe the workplace is more hazardous

About two-thirds of both chronically tired and non-drowsy workers reported exposure to air-borne dust and fibres, chemicals or fumes, poor quality air, loud noise or computer display terminals. However, among workers who were exposed, a higher proportion of sleepy workers – 59% compared with 47% of other workers – believed that these workplace conditions had a negative effect on their health.

Surprisingly, work-related accidents were no more common among tired than other workers. About 13% of chronically tired workers had suffered a workplace injury in the preceding 12 months, as had 8% of non-drowsy workers, but the difference was not statistically significant.¹¹

Summary

At 4% of workers aged 15 to 64, the chronically tired made up a very small proportion of the 1991 workforce. In most respects, their

demographic and labour market characteristics were no different from those of workers who did not suffer from drowsiness: perhaps the most striking quality about chronically tired workers is how uniformly they are distributed throughout the workforce. They were not concentrated in any particular major occupation or industry group, or even any type of shift schedule. Women were no more prone than men to chronic tiredness. Workers with young children were no more likely than those without preschoolers to be tired.

However, tired workers display individual characteristics that differ considerably from those of non-drowsy workers. Although chronically tired workers had the same amount of sleep each night as the rest of the workforce, they tended to be worriers; they were also more likely to have chronic health problems and almost twice as likely to consider their lives very stressful. All these factors – and undoubtedly many more – may have commingled to cause or exacerbate their tiredness. □

Notes

1 For example, in “Asleep at the wheel,” Canadian Press journalist Marlene Orton writes of “millions ... who drag their weary bodies from bed every day. Offices, factories, households and even the highways are filled with exhausted people who simply have not had a decent rest.” (*Ottawa Citizen*, 27 October, 1994).

2 Sleep problems were reported by 19% of working Canadians.

3 D.F. Dinges cited by Babkoff, Caspy and Mikulincer (1991).

4 Nurses on a rotating shift nodded off twice as frequently as those on a regular day/evening shift, and recorded twice as many accidents or errors related to sleepiness (Gold and others, 1992). In the United States, the role sleepiness plays in accidents is being argued in the courts, where an increasing number of employers are being sued by workers injured in accidents related to work-induced tiredness (*Trial*, 1993).

5 Marshall (1993) found that most wives in dual-earner families with children have primary responsibility for household tasks.

6 Matousek (1992) observed that daytime sleepiness affects young people (in his study, aged 20 to 33) more frequently than middle-aged people (aged 51 to 64), a finding he confirmed by self-assessed sleepiness ratings and by EEG monitoring. He suggests that this disparity may be due to different lifestyles.

7 Since characteristics of workers who “sometimes” and those who “never” have trouble staying awake are generally similar, the two groups are combined for the sake of clarity and brevity.

8 A recent study found that the amount of compensatory sleep needed after a night of sleep loss exceeded the extra 10% to 20% generally thought to be necessary. The researchers observed that this finding has considerable implications for people who consistently obtain less sleep than they need (Rosenthal and others, 1993).

9 A number of studies of insomniacs have found that stress and anxiety consistently affect certain stages of sleep, and that they may be partly responsible for sleep-maintenance insomnia. Research by Waters and others (1993) on the impact of stress, negative emotion and sensitivity to distractions in the sleeper’s environment concluded that “insomniacs’ sleep/wake systems are more responsive to emotional, stress and novel attention-provoking stimuli than are those of normal sleepers.”

10 Sunter and Morissette (1994) found that although the average number of hours in the standard work week has not changed over the last decade, this stability masks a substantial polarization of workers into those working longer hours (50 or more per week) and those working shorter hours (less than 30 per week).

11 Rates for workplace injuries were more than twice as high for men as for women whether they were tired or not (11% compared with 5%), reflecting the generally more hazardous nature of many blue-collar jobs.

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