

卷頭言

Work-related health costs do not disappear despite continuous changes of working conditions



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Recent conservative figures ⁽¹⁾ estimate that work-related deaths account for 2.5 per cent (women) and 3.9 per cent (men) of premature deaths between the ages of 25 and 74. Direct costs for treatment and indirect costs due to income loss and early retirement have been estimated in multiple countries. According to a 2008 publication ([German only] ⁽²⁾ by the German federal association of company health insurance providers the direct and indirect costs due to physical strain alone total 28 billion euros. A 2009 report by the Australian government ⁽³⁾ states that its work-related health costs amount to 57 billion Australian dollars, which represents 5.9 per cent of its GDP.

Previous studies commissioned by SECO have estimated the health costs of stress and back pain in Switzerland. An elaborate survey by Ramaciotti and Perriard (2003)⁽⁴⁾ estimated the cost of stress in Switzerland at 4.2 billion Swiss francs. Using representative survey data and published cost estimates, Läubli and Müller (2009) ⁽⁵⁾ calculated the work-related costs of musculo-skeletal complaints to be over 3 billion Swiss francs. The restrictive definition of “occupational illness” in Switzerland means that only very few health problems are recorded as such. However, extrapolating from the Australian study suggests that costs in Switzerland amounted to over 30 billion Swiss francs in 2012.

A better and more detailed cost calculation of the health consequences of arduous working conditions could help implement preventive measures more effectively. Using data from representative interviews of wage-dependent workers in Switzerland, it was analysed how many of the reported health problems can be traced back to unfavourable working conditions. The calculations performed allowed these work-related health problems to be attributed to specific types of demands at work ⁽⁶⁾. The main findings by this study are presented below.

Calculations were based on information provided by 397 women and 461 men in personal interviews. This information comprises details about their working conditions and health problems subjectively attributed to their work. The randomised nature of the sample enabled an extrapolation for all

of Switzerland.

Each of the 16 reported health problems were examined individually to calculate how strongly they correlate with 118 workplace conditions. The sheer number of statistical tests increases the chances of uncovering purely coincidental links. A very low significance threshold of $p < 0.00043$ was thus chosen to reduce the probability of such coincidental findings.

The results of this study indicate that the prevalence of work-related health problems differed enormously depending on job situation, ranging from 8 % to 77 % for men and 1 % to 50 % for women.

The pattern of work-related health problems differed between men and women. Women often reported headaches, but rarely injuries, hearing problems or allergies.

Cluster analysis was used to group jobs into types according to their respective conditions. This statistical technique showed that office jobs, if not limited exclusively to computer work, rarely result in work-related health problems for men. For women, jobs requiring little physical activity while at the same time providing high job satisfaction are particularly advantageous. Work-related health problems are highly prevalent among men whose jobs simultaneously expose them to strenuous physical activity and high levels of smoke, cold or noise. Assembly line work combined with low job satisfaction, as well as nursing jobs (regardless of job satisfaction) are linked to frequent health problems in women.

The working conditions that are most likely to cause health problems in men are (in order of importance) the inhalation of



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smoke/vapours/solvents, vibrations, loud noise and a fast work pace. For women, conditions are a tiring working position, disturbing interruptions during working hours, time pressure and bullying and/or sexual harassment. The combination of several factors produces an even greater detrimental effect.

Traditional healthcare cost analyses concentrate on costs due to treatment and retirement expenses in serious cases involving long-term or debilitating health problems. However, we are now seeing a noticeable increase in health problems that do not significantly affect absentee rates, but which nevertheless incur high costs for businesses by adversely impacting the productivity of certain workers. A study by Wieser et al. ⁽⁷⁾ in Switzerland, for example, found that 20 per cent of all people with back pain reported an average decrease in productivity of 28 per cent. The current study showed that work-related back pain is associated with the frequent lifting and carrying of heavy loads, as well as intense time pressure. A closer look revealed that lifting heavy loads at work and intense time pressure lead to annual health costs of 370 million and 380 million Swiss francs, respectively. Investing in lifting aids or limiting loads can lower costs substantially, particularly when work must be performed quickly.

In conclusion, when attempting to reduce costs, it is useful to home in on the sources of work-related health problems rather than merely calculate their overall cost. This uncovers correlations that can then be analysed; solutions can be proposed in the form of preventive measures. Health problems often adversely impact productivity, making the resulting costs relevant not only to accident- and health-insurance providers, but also to individual businesses.

Notes

- ⁽¹⁾ Järholm, B., Reuterwall, C. and Bystedt, J. (2013). Mortality attributable to occupational exposure in Sweden. *Scandinavian Journal of Work, Environment & Health*, Vol. 39, No. 1, 106-111.
- ⁽²⁾ Kosten arbeitsbedingter Erkrankungen und Frühberentung in Deutschland. Published by: BKK Bundesverband, Kro-

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- ⁽³⁾ The Cost of Work-related Injury and Illness for Australian Employers, Workers and the Community: 2005-06, MARCH 2009, ISBN 978 0 642 32801 4 PDF, © Commonwealth of Australia, 2009
- ⁽⁴⁾ Ramaciotti and Perriard (2003)
- ⁽⁵⁾ Läubli, T. and Müller, U. (2009). [in German]: Arbeitsbedingungen und Erkrankungen des Bewegungsapparates - Geschätzte Fallzahlen und volkswirtschaftliche Kosten für die Schweiz <http://www.seco.admin.ch/aktuell/00277/01164/01980/index.html?lang=en&msgid=28929>
- ⁽⁶⁾ Läubli, T.: Health-related costs of demanding working conditions. <http://www.seco.admin.ch/dokumentation/publikation/00008/00022/05570/index.html?lang=en>
- ⁽⁷⁾ Wieser, S., Horisberger, B., Schmidhauser, S., Eisenring, C., Brügger, U., Ruckstuhl, A., Dietrich, J., Mannion, A. F., Elfering, A., Tamcan, O. and Müller, U. (2011). Cost of low back pain in Switzerland in 2005. *The European Journal of Health Economics*, Vol. 2, No. 5, 455-467.

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