

Work organization: the neglected child of (social) epidemiology

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SPM publishes a series of contributions related to two central papers, on "Monitoring the changing organization of work" (Sauter & Murphy 2003) and on "Work organization intervention" (Murphy & Sauter 2004). These fora happily remind us that some scientists are still worrying about the health effects of the organization of the workplace.

It is trivial to recall that most of the life of working people is spent between work and home, with only a small fraction of it being dedicated to leisure. Most surveillance research has concentrated on behavioral factors such as diet, physical exercise, smoking and screening practices. These factors act in all three dimensions of our lives (work, home, leisure), but their potential preventive relevance to date applies essentially to life outside the workplace. However, even the best intentions relative to being active and having a healthy diet can be defeated by a refractory work organization. In this context, the move towards surveillance of work organization is of great importance. Work organization surveillance can build upon the already substantial experience accrued for the surveillance of behavioral and biological determinants in the community (McQueen & Puska 2003).

Community surveillance

Over the last 30 years, community surveillance has been characterized by a transition from surveillance of disease (mostly causes of deaths) to surveillance of risk factors for disease. In most situations, the incidence of disease or death conveys very little information with respect to the currently prevalent risk factors in the community. For example, trends in lung cancer incidence or mortality reflect the smoking exposure 10 to 15 years earlier. Disease trends may still be rising at the same time that prevalence of exposure has begun or has been continuing to decline (e.g., lung cancer incidence and smoking prevalence

for Western men in the eighties). Conversely, disease trends may be plateauing, while the prevalence of exposure is on the rise (e.g., lung cancer incidence and smoking prevalence among Western women in the seventies). In contrast, surveillance of health determinants indicates which are the culprits currently operating in the community, and is therefore a natural basis for prevention. Risks associated with exposure to dietary factors, sedentary behavior, obesity, hypercholesterolemia, hypertension, smoking, etc. had been clearly established by epidemiologic, etiological studies in the 1950s, 1960s and 1970s. Therefore, tracking and controlling the evolution of risk factor prevalence in the community was simply the logical next step.

Surveillance of risk factors has itself been evolving (Morabia 2000). Since 1945, large national health surveys have been launched in the United Kingdom and the United States, later in continental Europe, and now in other parts of the world, generating a wealth of information about behavioral and biological factors. It soon became apparent that the data were rarely comparable across surveys. Attempts were therefore made to achieve the comparability that was lacking between existing databases. The current WHO initiative entitled SURF (SURveillance of Risk Factors) is a very important element in this process (Strong, in press). Its aim is to establish an international database of risk factor distributions by compiling existing surveys worldwide. But, from an epidemiological perspective, it is clear that data collected in very different ways and using a myriad of different instruments have a long way to go before becoming comparable enough to serve as dependable international scientific surveys (Beer-Borst et al. 2000). The WHO "Step" project is developing a common core surveillance questionnaire to be added to locally-based surveys (Bonita et al. 2003).

Work organization surveillance

A movement analogous to what has happened in community surveillance is now observable in work organization surveillance. There has been a broadening of its focus, moving from surveillance of injuries and illness to surveillance of exposure levels to known hazards (e.g., asbestos, nickel, formaldehyde) (Wegman & Stellman 1998) and now to monitoring the work organization, *per se*. The former led to post hoc interventions, whereas the latter naturally leads to preventive interventions (the topic of SPM's next forum). Sauter and Murphy (Sauter & Murphy 2003) list a series of work organization surveys performed in North America, Europe, Australia, and Japan, and reach the same sobering conclusion as for community surveillance: "Presently, virtually no communality exists among monitoring surveys within or between jurisdictions". They therefore note that: "One obvious step to improve upon this situation would be the development of at least a minimal set of core items on work organization and on health for inclusion across national and international work environment surveys" (Sauter & Murphy 2003).

Apparently, both community and work organization surveillance seek solutions to similar types of problems. It is however easy to see that the obstacles are more formidable for the latter than for the former. The workplace is far less accessible for research than the community. Most surveys reported by Sauter and Murphy are household surveys. Access to the workplace to inspect, monitor, and perform epidemiologic research requires legal foundations that are still lacking or are very limited in most countries. As a result, risks and their corresponding hazards associated with work organization are less well established than those

related to behavioral and biological factors, especially for the newest organizational practices (e.g., telecommuting, temporary work, lean technologies). The indispensable items to be included in the monitoring core are therefore not as obvious as for community surveillance. In addition, if risk has to be related to and compared across occupational categories, it is a shame to observe that there is no up-to-date occupational categorization available for epidemiologic studies. We are still mainly relying on the United Kingdom classification of occupation (Chandola 2000), which was developed at a time when the work environment looked very different and the workforce comprised essentially men. Much greater efforts have been made to simplify and shorten diet or physical activity questionnaires than to create epidemiologically-adapted occupational questionnaires. This is not saying that one is more important than the other, but simply that the essential conditions required, from an epidemiologic perspective, to establish risk factors and monitor them are still primitive. With some notable exceptions, such as the assessment of the psychological demand and the social support dimensions of work or the identification of occupational carcinogens, the measurement of occupational risk factors has been neglected, even among epidemiologists primarily interested in the social determinants of health.

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We need data!

Strikingly, very little survey data are reported in the papers we publish. Their references are mostly to scientific reports (Merllie & Paoli, www.eurofound.eu.int/publications/files/EF00128EN.pdf) and rarely to peer-reviewed, major scientific journals. The success and relevance of these surveys are difficult to judge on the basis of the present fora. There is an urgent need for data, and in particular of comparable data. *SPM* can contribute to making comparable data available to everyone interested in work organization monitoring through its special section entitled "International Comparison of Health Determinants". A requirement for the papers in this section is to provide an Appendix with their raw data presented in a standardized format (see *SPM's* recommendations for authors). We therefore heartily invite researchers collecting data on work organization factors to submit papers to this section! As long as these papers dovetail with *SPM's* primary interests in surveillance of health determinants and health promotion, these papers will be peer-reviewed and eventually published.



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