

Occupational Diseases, Working Ability and Employment Status in the Working Population of Croatia

Marija Bubaš¹, Milan Milošević² and Diana Delić-Brkljačić³

¹ Croatian Institute of Occupational Health, Zagreb, Croatia

² Department of Environmental and Occupational Health, School of Public Health »Andrija Štampar«, School of Medicine, University of Zagreb, Zagreb, Croatia

³ Clinic of Internal Medicine, University Hospital »Sestre milosrdnice«, School of Medicine, University of Zagreb, Zagreb, Croatia

ABSTRACT

The paper gives insight into the working ability and employment status of workers with recognized occupational diseases in Croatia. The analysis based on working ability data from 212 workers shows that 12 (5.5%) workers have general disability for work, 75 (35.5%) occupational disability for work, 98 (46.4%) danger of disability onset, 13 (6%) no disability and 14 (6.5%) are sent for further medical treatment. The highest frequency of occupational diseases is in the group of workers with 41–50 years of age, in the category of 20–24 exposure years. Official data imply that the incidence rate of occupational diseases in Croatia is 4 times lower than in European Union. Such a low incidence rate derives from problems in the system of healthcare and health insurance, and also from problems in the system of monitoring and registering of occupational diseases.

Key words: occupational diseases, disability evaluation, employment status, workers

Introduction

Based on the 1998 Pension Insurance Act, regular retirement goes into effect upon reaching the age of 65 (male) and 60 (female), assuming the individual has had at least 15 years of employment. Therefore, workers whose employment starts early in life may work up to 45 years (male) and 40 years (female) before reaching the full pension¹. This state of affairs presumes the existence of work ability throughout a lengthy working life. However, the case is – mainly due to diminished health – that the extent of work ability often degrades. Although health is influenced by variety of factors, occupational and work related health impairments are of special importance (justification of disability claims and other compensations, insalubrity clearance and workplace readjustment, disease treatment and rehabilitation, etc.) for the working population and other stakeholders (employers, insurers, physicians).

In our paper we focus on the population of workers with occupational diseases. First, we have to distinguish

the difference between occupational and work-related disease. Occupational disease is an impairment of health caused by continued exposure to conditions inherent in a person's occupation or a disease caused by employment or resulting from the nature of employment. Occupational diseases are those caused by occupational exposure to a specific physical, chemical or biological hazard². On the other hand, »work-induced« or »work-related« diseases are broader in their scope of definition. Here, the occupational hazard does not necessarily constitute the primary cause of the disease, but it may be one of many compounding factors, or it may, for instance, exacerbate a disease of other origins^{2,3}. Furthermore, the definition of work-related diseases can be broadened to encompass diseases in which work-related social or lifestyle factors play a precipitating role³. The spectrum of occupational diseases influences all organ systems, so, consequently, workers with occupational diseases have an impairment of health which reflects an alteration from

normal body functions⁴. Their disability for work is based on their medical impairment and the way in which that impairment influences their work capacity^{5,6}. Therefore, the aim of our research was to get insight into the influence of occupationally caused disease on working ability and employment. The research, the first of this kind in Croatia, was based on the available medical documentation and interviews with workers performed by Croatian Institute of Occupational Health (CIOH).

Subjects and Methods

Occupational diseases

Although often taken as such, the notions *occupational disease* and *work related disease* are not synonymous. Occupational disease results directly and solely out of harmful exposure at the workplace, whereas in the case of work related disease the workplace hazard is autonomously insufficient and presents only one out of many causal disease factors. Out of this distinction, different rights and obligations for all stakeholders arise. Therefore, the terms under which the disease can be recognized as occupational are in many countries determined by law. In Croatia, the disease is considered to be occupational when proven to be: (a) caused by hazards or harmful effects in the working process or in the working surroundings, or (b) a consequence of the exposure to the hazards that are related to the working process (or working surroundings) while the intensity of the hazard and duration of exposure are known to be hazardous for health of the exposed workers⁶. Furthermore, most countries have produced lists of diseases that can be recognized as occupational (generally limited to those diseases where a strong cause-effect relationship has been proven). However, with large differences in the number of categories, national lists vary significantly in terms of those diseases recognized as occupational. Therefore, the recommended lists were developed by the International Labour Organisation (ILO) and the European Community, leading to at least some degree of harmonisation. The Croatian *List of occupational diseases*⁷ based on ILO recommendations was implemented in 1998. It contained 44 prescribed occupational diseases or groups of diseases, and was the legal base for recognising occupational diseases until October of 2007. The subject matter of this paper are officially recognized occupational diseases in period from 1999–2005 during which the aforementioned 1998 List of occupational diseases was in use.

Occupational diseases are monitored by the Croatian National Institute of Public Health (CNIPH) and State Inspectorate (SI). The CNIPH collects the data indirectly through the Croatian Institute of Health Insurance and directly from physicians in occupational health service that diagnosed and affirmed the occupational disease. The SI collects data from employers that are obliged to draft short reports annually on injuries and occupational diseases.

Our analysis is primarily based on data from the Croatian Institute of Occupational Health (CIOH)⁸, where

361 persons with officially recognized occupational diseases were examined in the period 1999–2005. All of them were interviewed afterwards by telephone, based upon the EUROSTAT methodology on occupational disease follow-up⁹.

Working ability and employment status

After affirming the existence of occupational disease, the workers had their working ability evaluated in accordance with the Act on Pension Insurance¹⁰. The validation of working ability was based on individual working ability evaluations carried out by Croatian Institute for Pension Insurance (CIPI) professionals. Information about these outcomes was gathered during the interviews and divided into categories of questions and answers (i.e.: *can you tell us how was your working ability evaluated by CIPI?*); the possible answers were: *unknown, general disability for work, occupational disability for work, danger of disability onset, no disability and further treatment*. Persons without CIPI working ability assessment were allocated to the group with the *unknown* status. With our focus on strictly settled assessments, the category *unknown* represented our exemption category. We assessed the years of exposure by using the worker's medical history data from the CIOH registry⁸. Only the duration of exposure to the hazard which caused the onset of occupational disease was taken into account.

The employment status identification was purely interview-based. We used answer categories *unknown, same workplace, change of workplace, loss of employment and disability pension*. Subjects distributed to the *unknown* group were excluded from further assessment. We retrieved the information on occupation and employer's field of economic activity from the worker's medical history and rearranged the data in accordance with the national classification methodology^{11,12}. Thereby we got insight into economic branches¹¹ and the number of workers and occupational diseases per branch.

Results

Occupational diseases

According to the CNIPH, in the period from 1999–2005 there were 699 registered occupational diseases in Croatia¹³. However, the State Inspectorate reports for the same period 1,052 occupational diseases¹⁴. The 361 examined and interviewed persons by CIOH represent 51.6% (34.3% respectively) of all registered occupational diseases in the period 1999–2005. Thereof were 212 workers (58.7%) with distinct working ability assessment and employment status (142 males and 70 females). The highest frequency of occupational diseases was in the group with 41–50 years of age, in the category of 20–24 exposure years. The average worker with registered occupational disease is 45.5 years old, with 19.2 exposure years. Workers were mainly (3/4) employed in two work-intensive economic branches: in *agriculture, hunting and forestry*

were 89 (41.9%) workers, and 75 (35.3%) in *industrial production and manufacturing*. In the third place was *healthcare* with 27 (12.7%). This ranking matches with the comparable CNIPH data (SI data non-existent).

Working ability and employment status

Overall, we found that 12 (5.5%) workers had general disability for work, 75 (35.5%) occupational disability for work, 98 (46.4%) danger of disability onset, 13 (6%) no disability and 14 (6.5%) were sent for further medical treatment. After being diagnosed with an occupational disease, 10 workers (4.9%) lost their jobs, 37 (17.4%) continued to work at the same workplace which was considered to be causative for occupational disease (this is allowed only when the disease is at its onset and improvement of working conditions is undertaken before the worker returns to work), 94 (44.2%) changed workplace and 71 (33.3%) were given disability pension. Our detailed results are in Table 1, consisting of original values arranged by assessed work ability and employment status for monitored 212 workers with recognized occupational disease.

As expected, all workers with *general disability for work* were given disability pension. Persons with recognized occupational disease that were found *occupationally disabled for work* were mostly sent to disability retirement; this group accounted for 80.3% of our retired persons. The highest frequency of workplace changes was registered in the group of 98 persons with *danger of disability onset*, where 75 (or 76.5%) of them changed workplace. Workers that were found to have no disability as well as those sent for further treatment predominantly stayed at the same workplace (61.5% and 78.5%, respectively).

Discussion and Conclusion

Our results indicate that 75 out of 100 workers with registered occupational disease were employed in two economic branches: *agriculture, hunting and forestry* and *industrial production and manufacturing* (41.9% and 35.3%, respectively). This is in agreement with the

CNIPH data. Further insight into actual outcomes for our group of 212 workers confirmed the logical proximate cause between working ability evaluations and employment status. The working ability and employment status outcome for workers with recognized occupational disease is, for the majority of cases, in accordance with expected outcome (e.g. most of the workers changed their workplace – this is in accordance with the employer's legal obligation to give the worker the possibility to work at another workplace). However, 15 out of 98 workers with danger of disability onset stayed at the same workplace and 7 workers lost their jobs. These cases indicate the importance of law enforcement, with respect to the monitoring role of the State Inspectorate.

The CNIPH and SI are collecting data about occupational diseases. However, the data discrepancies are large scaled. In international comparison, the Croatian data seems even more unsound. For example, the Croatian statistics for 2005 shows 3.88 new cases of occupational diseases per 100,000, while the corresponding EU number was 15.91¹⁵. The conclusion about superb working conditions in Croatia would indeed be superficial, since the low incidence rate derives from problems in the Croatian health care and insurance system. There is no formal mandatory cooperation between primary health care and occupational health care professionals. The law stipulates that specific health care of workers is not a part of the primary health care system, and therefore the state health insurance does not pay for primary prevention costs of specific health care of workers. Consequently, occupational health physicians do not systematically carry out their primary function: prevention. Furthermore, the cooperation between occupational health care specialists, family physicians, state health insurer evaluation committees and CIPI professionals is absent.

It was necessary to study the situation from the point of occupational diseases and their consequences on working ability of affected workers because if we want to achieve lifelong fitness for work, we must have in mind that preventive measures can not be implemented unless we understand the problem. Therefore, the collaboration between aforementioned parties and the application of a

TABLE 1
WORKING ABILITY AND EMPLOYMENT STATUS FOR WORKERS WITH REGISTERED OCCUPATIONAL DISEASE
IN THE PERIOD 1999–2005

Working ability	Employment status				
	Same workplace	Workplace changed	Employment lost	Disability pension	Total
General disability	0	0	0	12	12
Occupational disability	3	13	2	57	75
Danger of disability onset	15	75	7	1*	98
No disability	8	4	0	1*	13
Further treatment	11	2	1	0	14
Total	37	94	10	71	212

* Regular retirement

new financial model where occupational health services are a part of the primary health care system (through contracting with the insurer) appear to be the condition *sine qua non* for the efficient protection of workers' health.

Even though we doubt the total number of 2,388 registered occupational diseases at CNIPH (1990–2005), we have no reason not to believe that our sample gave a fair picture of the situation in Croatia. Our figures, collected

on the grounds of EUROSTAT methodology, analyzed and combined together with all available official data, indicate the impact of occupational diseases on the working ability and employment status of the Croatian labour force.

A future follow-up study will show whether new legislation on specific healthcare protection of workers and safety at work will improve the current situation in Croatia.

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M. Bubaš

Croatian Institute of Occupational Health, Av. V. Holjevcica 22, 10000 Zagreb, Croatia
e-mail: mbubas@net.hr

PROFESIONALNE BOLESTI, RADNA SPOSOBNOST I RADNI STATUS HRVATSKE RADNE POPULACIJE

SAŽETAK

Ovaj rad daje uvid u radnu sposobnost i radni status radnika s utvrđenom profesionalnom bolešću. Stoga su analizirani podaci iz ocjena radne sposobnosti i radnog statusa za 212 radnika sa dijagnosticiranom profesionalnom bolešću. Prema tim podacima 12 (5,5%) radnika ima opću nesposobnost za rad, 75 (35,5%) profesionalnu nesposobnost za rad, 98 (46,4%) opasnost od nastanka invalidnosti, 13 (6%) nema invalidnost i 14 (6,5%) je poslano na daljnje liječenje. Najveća učestalost profesionalnih bolesti bila je u grupi radnika starosne dobi 41–50 godina, tj. u skupini onih sa 20–24 godine radnog staža. Službeni podaci za Hrvatsku ukazuju da je učestalost pojave novih slučajeva profesionalnih bolesti 4 puta niža od stope u Europskoj uniji. Međutim niska stopa proizlazi iz problema u sustavu zdravstva i zdravstvenog osiguranja, ali i problema u praćenju i prijavljivanju profesionalnih bolesti.