Self-reported Health Problems and Work Disability: A Prospective Cohort Study of Employees from Different Industries

Background:

The main goals of health surveillance are to prevent work-related illnesses, to support employees' health and ability to work and reduce absenteeism as defined in the international directive (Council Directive 83/391/EEC) and International Labor Office's (ILO) guidelines [1]. This is important due to the cost of work disability (WD) has become a significant burden to public finances [2]. Some screening questionnaires are used as a part of targeted health surveillance to identify employees at temporary work disability (TWD), [3-5], and permanent work disability (PWD) risk [5, 6].

In the present study, we used a health risk appraisal (HRA), which presents the results as different risk categories on the basis of self-reported symptoms and health behaviors. The HRA was able to identify blue-collar employees in the construction industry with a high number of sickness absence (SA) days in a previous study [4].

***Aim*:**

Our objective was to study whether self-reported problems assessed by the HRA predict TWD defined as sickness absence (SA), and PWD defined as disability benefit (DB) in Finnish occupational health setting among employees from different industries.

***Methods*:**

The results of the HRA were combined with the registry data on SA of 21608 and DB of 22023 employees. The explanatory variables were the HRA results, occupational group, age and number of SA days before the survey. The outcome measures were accumulated SA days during 12-month follow-up and granted DB as proxy measures of TWD and PWD. We used a hurdle model with negative binomial response to analyze zero-inflated count data of SA, the Fine-Gray model to estimate the predictors for DB occurring over time, and cumulative incidence function to illustrate the difference between HRA categories.

***Results*:**

"WD risk" categories as defined in the HRA predicted SA and DB regardless of occupational group and gender.

The ratio of SA days means varied between 2.7 and 6.1 among those with "WD risk" category and the reference category with "no findings". The lower limit of the 95% CI was at the lowest 1.6. In the Hurdle model, WD risk factors, SA days prior the HRA and obesity were additive predictors of the propensity for SA and/or the accumulated SA days in all occupational groups.

In addition to age and prior sick leave days, the "WD risk" category in the HRA predicted DB. HRs were 10.9 or over with the lower limit of the 95% CI being 3.3 or over among those with two simultaneous findings. After six years, 14% of the females and 17% of the males with three or more simultaneous WD risk factors had received a DB, whereas the respective figures among those without findings were 1.9% and 0.3%.

Limitations:

We did not have access to the statutory accident insurance data, so WD resulting from accidents at work, occupational diseases, and traffic accidents are not included in our study.

Some WD criteria are comparable between countries, such as requirements for a health condition in relation to work and the permanence [7]. However, the implementation of the legislation varies between countries [2], and therefore our results must be interpreted with caution in the international context.

Conclusion:

The HRA "WD risk" categories, age and earlier SA days predicted TWD and PWD in an additive manner among both genders. The use of the HRA with predictive validity seem appropriate for targeting health surveillance efforts to employees in need. These findings have implications for targeting occupational health care actions towards those in need, to prevent WD. The HRA is a potential tool for recognizing employees who are at an increased risk of WD.

References:

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