



Editorial

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The importance of preventing work-related disability

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The importance of preventing work-related disability

In many developed countries, policies are enacted to increase labor force participation among older workers and to extend the age of statutory retirement in response to the ageing of society. Within Europe, the employment rate among 55–65-year olds has increased in the past decade, but there are large differences among countries, for example, reported participation among men varies from 41% in France to 73% in Sweden (1). Hence, in most countries, it will already be a large societal challenge to support workers to maintain their ability to work until the age of 65. The increase in the statutory retirement age to 67 years and beyond will require additional societal efforts to ensure that older workers can continue to contribute to a productive workforce.

Work-related disability is one of the most important routes of displacement from the labor market (2). Recent articles have addressed a variety of work-related factors that have increased the risk of disability pension (3–6). This particular use of the term “disability pension” demonstrates that this exit route from paid employment has dramatic consequences for most workers: once out, always out. In this thematic issue of the *Scandinavian Journal of Work, Environment & Health*, several articles address the causes and consequences of work-related disability and target prevention strategies. Clearly, aging at work and disability will remain an important research area in the foreseeable future.

Two linked publications (one previously published) have studied sickness absence and disability pension patterns in a large cohort of public-sector employees across different towns and regions in Finland. The first study, in this issue, addresses current concerns about higher flexibility in labor contracts by investigating whether temporary contract workers differ from those with a permanent contract with respect to prolonged sickness absence and disability pension for depression (7). Temporary employment predicted longer duration of prolonged sickness absence (4–12 months), especially among the lower educated and older workers, but had no influence on onset and recurrence. This finding (ie, return to work was faster among those with a permanent employment) raises important questions about the current labor market: Is there sufficient institutional support for temporary employees? Are employers less willing to hire temporary employees with depressive symptoms? Is there less access and lower quality of rehabilitation programs for temporary employees? These questions urgently need answers given the rapid growth in flexible labor contracts in most countries.

Published in the journal's last issue, the related study by Juvani and colleagues (6) reported that – during a mean follow-up of almost 9 years – about 8.9% of employees were granted a disability pension, primarily for musculoskeletal diseases (43%) and depression (19%). Effort–reward imbalance, estimated at work-unit level, was a strong risk factor for disability due to depression but did not influence disability due to musculoskeletal diseases. Clear inequalities across the workforce were present. Civil servants in the highest occupational class reported the highest efforts at work, but rewards were balanced accordingly. Employees in the lowest occupational classes suffered from the lowest rewards and highest imbalance between efforts and rewards and were most at risk for premature displacement from the labor market due to depression disability (6). Since a considerable part of disability pensions was granted to employees below the age of 50 years, the consequences for working careers must have been large in this study population. In the Norwegian disability register, those persons with a benefit for a mental disorder lost approximately 19 working years before the age of 65 years (8).

Järholm and colleagues demonstrated the substantial consequences of becoming too disabled to remain in the workforce (9). In a large construction cohort with almost 30 years of follow-up, profound

differences were observed among 22 occupational groups for risk of disability pension, varying from a relative risk (RR) of 2.16 for rock workers to 0.54 for salaried workers compared to the reference group comprised of electricians. This 4-fold difference was reflected in working years lost due to disability pension before the age of 65 within these occupational groups: 3.2 years for rock workers, 1.4 years for electricians, and 0.7 years for salaried workers. Most working years were lost after the age of 50, predicting that an increase of the statutory retirement age from 65 to 67 years will imply that in some occupational groups a substantial part of all workers will spend these additional years in disability.

These occupational differences in the risk of disability pension will increase socioeconomic inequalities in the population. The longitudinal register-based study in the Finnish workforce shows that manual workers are at increased risk for disability pension compared to upper-class, non-manual workers with a RR of 2.79 and 2.29 among men and women, respectively. Disability due to musculoskeletal disorders and cardiovascular diseases contributed most to the observed socioeconomic differences (10). This study again raises the question whether it is a fair policy to increase the statutory retirement age regardless of the strenuous jobs performed.

Disability is primarily investigated for causes and consequences in observational studies. There are very few experimental studies on primary and secondary preventive interventions. Sundstrup and colleagues developed a specific strength training for upper-extremity muscles for slaughterhouse workers suffering from upper-extremity chronic pain (11). This occupational group is notoriously known for repetitive and high-force activities and consequent onset of various musculoskeletal disorders and associated work-related disability. The individual strength training was compared to the usual-care ergonomic training approach for impact on self-reported work ability. After ten weeks, a relative difference of 6% in work ability was observed, primarily caused by a strong deterioration in work ability in the usual-care group and a slight improvement in the strength-training group. Hence, the intervention shows some promising short-term benefits, but its ability to contribute to the prevention of long-term displacement from paid employment due to disability remains to be seen.

The studies on work-related disability in this issue of the *Scandinavian Journal of Work, Environment & Health* clearly demonstrate the importance of disability as a major cause of lost working years in the workforce. The studies present evidence that disadvantaged groups in society suffer most from strenuous working conditions and resulting work-related disability. With growing pressure to work later in life, it is paramount to support the ability of these workers to continue working.

Recently, 14 European countries and Canada launched a research program "More Years, Better Lives: Strategic Research Agenda on Demographic Change" (12). The research agenda has a particular focus on areas that can inform policy and includes economic and social production and ways they could be maintained in a sustainable manner across the extended lifespan. The agenda emphasizes the implications of greater diversity, not only in relation to aging and work ability but also in the labor market due to increasing socioeconomic differences and new economic trends such as the growing unpaid and informal work market. The research agenda confirms that there is need for both etiological and intervention research on new models for disability prevention and reintegration among both young and aging workers. The interventions should especially consider increased diversity and socioeconomic differences at work.

The incentive for promoting working life among older workers is clearly there, but until now surprisingly little is known about what programs and policies are needed. The prevalence of disease is high among older workers, for example a recent Finnish study found that 74% of municipal employees had a chronic disease at the age of around 60 (13). Should workers in strenuous jobs try to find other employment? Should employers tolerate a worker with one or several chronic diseases? Most studies focus on individual factors of reduced work ability or loss of paid employment, such as the imbalance between job demands and personal capabilities and unhealthy behaviors, whereas societies and employers will also strongly determine older workers' inclusion in the workforce. These contextual factors are considerably

less-well studied and may provide crucial information on necessary actions to increase the participation of older workers in working life. This societal challenge requires active contributions from workers, employers, and governments.

References

1. Anxo D, Ericson T, Jolivet A. Working longer in European countries: underestimated and unexpected results. *Int J Manpower*. 2012;33:612-28. <http://dx.doi.org/10.1108/01437721211261787>
2. Schuring M, Robroek SJW, Otten FWJ, Arts CH, Burdorf A. The effect of ill health and socioeconomic status on labor force exit and re-employment: a prospective study with ten years follow up in the Netherlands. *Scand J Work Environ Health*. 2013;39:134-43. <http://dx.doi.org/10.5271/sjweh.3321>
3. Kärkkäinen S, Pitkämäki J, Silventoinen K, Svedberg P, Huunan-Seppälä A, Koskenvuo K et al. Disability pension due to musculoskeletal diagnoses: importance of work-related factors in a prospective cohort study of Finnish twins. *Scand J Work Environ Health*. 2013;39:343-50. <http://dx.doi.org/10.5271/sjweh.3345>
4. Samuelsson Å, Ropponen A, Alexanderson K, Svedberg P. et al. Psychosocial working conditions, occupational groups, and risk of disability pension due to mental diagnoses: a cohort study of 43,000 Swedish twins. *Scand J Work Environ Health*. 2013;39:351-60. <http://dx.doi.org/10.5271/sjweh.3338>
5. Pedersen J, Bjoerner JB, Burr H, Christensen KB. Transitions between sickness absence, work, unemployment, and disability in Denmark 2004-2008. *Scand J Work Environ Health*. 2012;38:516-26. <http://dx.doi.org/10.5271/sjweh.3293>
6. Juvani A, Oksanen T, Salo P, Virtanen M, Kivimäki M, Pentti J et al. Effort–reward imbalance as a risk factor for disability pension: the Finnish Public Sector Study. *Scand J Work Environ Health*. 2014;40(3):266–277. <http://dx.doi.org/10.5271/sjweh.3402>
7. Ervasti J, Vahtera J, Virtanen P, Pentti J, Oksanen T, Ahola K et al. Is temporary employment a risk factor for work disability due to depressive disorders and delayed return to work? The Finnish Public Sector Study. *Scand J Work Environ Health*. 2014;40(4):343–352. <http://dx.doi.org/10.5271/sjweh.3424>
8. Knudsen AK, Øverland S, Hotopf M, Mykletun A. Lost working years due to mental disorders: an analysis of the Norwegian disability pension registry. *PLoS One*. 2012;7:e42567. <http://dx.doi.org/10.1371/journal.pone.0042567>
9. Järholm B, Stattin M, Robroek SJW, Janlert U, Karlsson B, Burdorf A. Heavy work and disability pension – a long term follow-up of Swedish construction workers. *Scand J Work Environ Health*. 2014;40(4):335–342. <http://dx.doi.org/10.5271/sjweh.3413>
10. Polvinen A, Laaksonen M, Gould R, Lahelma E, Martikainen P. The contribution of major diagnostic causes to socioeconomic differences in disability retirement. *Scand J Work Environ Health*. 2014;40(4):353–360. <http://dx.doi.org/10.5271/sjweh.3411>
11. Sundstrup E, Jakobsen MD, Brandt M, Jay K, Persson R, Aagaard P et al. Workplace strength training prevents deterioration of work ability among workers with chronic pain and work disability: a randomized controlled trial. *Scand J Work Environ Health*. 2014;40(3):244–251. <http://dx.doi.org/10.5271/sjweh.3419>
12. More Years, Better Lives. Strategic Research Agenda on Demographic Change. [Cited 1 June 2014]. Available from: <http://www.jp-demographic.eu/>
13. Virtanen M, Oksanen T, Batty GD, Ala-Mursula L, Salo P, Elovainio M, et al. Extending employment beyond the pensionable age: a cohort study of the influence of chronic diseases, health risk factors, and working conditions. *PLoS One*. 2014;9: e88695. <http://dx.doi.org/10.1371/journal.pone.0088695>

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