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# Understanding the role of work in socioeconomic health inequalities

The rapid growth in life expectancy of four years over the past two decades in most EU countries is a great testament to the success of achieving healthy ageing (1). In any ageing society, it is of paramount importance for economic prosperity to prolong working life in order to balance a population of active versus inactive persons. However, health and wealth are not distributed very fairly across society. Poorer educational attainment and lack of paid employment are persistent causes for inequalities in health and wealth (2). There is ample evidence of a recent widening of social inequalities in life expectancy in many countries. In Denmark – one of the most egalitarian societies in the world – educational inequality life expectancy increased among men from 4.8 years in 1987 to 6.4 years in 2011. For women, an increase was observed from 3.7 to 4.7 years (3). Two important theories are put forward to explain this striking development. The first theory points at the strong trend of decreasing prevalence of unhealthy behaviors with higher educational attainment. Since health promotion programs generally have higher uptake and effectiveness among better educated persons (4), the so-called "intervention-generated inequalities" might contribute to increased inequalities (3). The second theory posits that labor market conditions are more unfavorable for those with lower education and their jobs are more strenuous as well (3). A recent comparative study across selected European countries showed that lower educated persons had substantially higher rates of disability and unemployment and also had more often less stable employment contracts (5). A longitudinal study among older workers in 11 European countries reported that among work-related factors studied, perceived lack of job control was consistently a risk factor for disability benefits, unemployment, and early retirement during the four years of follow-up (6).

Many countries are developing policies and strategies to encourage workers to remain at work longer. These seldom take into account the particular role of health and working conditions, which impact the ability of older workers to remain in paid employment until statutory retirement age. For example, if strenuous work has adverse effects on health, especially at older age with declining physical and cognitive functions, timely retirement may be health-preserving. It may also prevent such workers from spending the required added years before retirement in disability and unemployment rather than paid employment.

The current issue of the *Scandinavian Journal of Work, Environment & Health* contains publications that contribute to the unravelling the role of work in socioeconomic inequalities. Addressed in this issue, two distinct mechanisms can be distinguished: educational differences in working conditions encountered on the job and educational attainment as a determinant of labor market position.

The first study by Kaikkonen and colleagues (7) demonstrates a marked socioeconomic gradient in sickness absence in a longitudinal study with 8-year follow-up among Finnish citizens. The difference between the lowest and highest educational level was 4.8 days/year (60%) among men and 5.7 days/year (56%) among women for registered episodes of sickness absence of $\geq$10 days. In a mediation analysis, about 20–25% of these differences could be attributed to self-reported health status, health behavior, and physical and psychosocial working conditions. Interestingly, the crude influence of physical working conditions was substantially higher than all other factors with a maximum effect of 1.2–1.4 days/year (7). The study has several limitations that hamper more precise estimates of the direct and indirect effects of working conditions, health, and health behavior. For example, these factors were all based on self-reports in the baseline questionnaire and, thus, may suffer from common source bias. Another obvious problem is that these factors were measured only at baseline and treated as time-independent variables in the statistical analysis. When working conditions, health, and health behavior vary considerably over time,

the reported associations will most likely underestimate the impact of these factors on sickness absence. A third point of concern may be that only sickness absence periods of ≥10 days were available from the register, but other studies have indicated that educational differences are more prominent in longer sickness absence periods (8). In spite of this critique, the study certainly corroborates the hypothesis that educational differences in working conditions have a substantial impact on the ability of workers to be productive at work. It complements earlier studies on educational differences in disability benefits due to musculoskeletal disorders linked to physically demanding work (9), and physical strain and low job control as explanatory factors for educational differences in disability benefits (10).

The second publication presents a longitudinal study with 6-year follow-up among a national sample of households in Korea. Using annual waves with time-varying information on independent and dependent variables, precarious employment was associated with onset of severe depressive symptoms with a stronger effect among women than men. Moreover, change from a permanent to a temporary employment contract was also associated with an increase in onset of severe depressive symptoms. Precarious employment was more prevalent among those with intermediate or lower education, hence, employment status at the labor market introduced social inequalities (11). These results reflect previous reports in Asia that precarious employment increased the risk on serious psychological distress (12) and in Finland where adverse effects were observed for prolonged sickness absence and disability pension for depression, especially among the lower educated and older workers (13). Given the rapid growth in flexible labor contracts in most countries, their impact on socioeconomic health inequalities raises concerns on the effectiveness of current policies and social and institutional systems for temporary employees that will support them to work longer in good health.

There is increasing evidence that work plays a key role in socioeconomic health inequalities. However, there is a shocking lack of evidence how current labor market and retirement policies will influence socio-economic inequalities in health and wealth. Currently available evidence suggests that disparities may increase when these policies are blind to the mechanisms of how work influences health. There is an urgent need for studies that present empirical evidence on the consequences of the rapid changes in national policies on disability and retirement aimed at prolonging working careers for the health of the workforce.

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