Domain: Health and health-related behaviour

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Introduction[1]

In general, the relation between health and employment participation has been studied extensively. The predominant conclusion is that poor health is one of the most predictive determinant for exit from work. Partially, this conclusion is obvious as one of the main exit routes is disability pension and health problems are a requirement for receiving a disability pension. However, the relation between health and employment participation appears to be more complicated. The context plays an important role, not only in the relation of health with unemployment and (early) retirement but also in the relation with disability. Firstly, the relation is dependent on the context at macro level; level of unemployment and institutional arrangements, such as the pension system and the availability of disability benefits, is different among countries, which will be reflected in the use of exit routes. Then, the relation between health and employment participation is dependent on the context in the domestic domain and at work. For example, work characteristics may interact with health factors. Finally, individual factors are important in the relation. A healthy lifestyle will have an effect on health and thus on employment participation. But also motivation to work and financial resources are important factors that may moderate the relationship. Furthermore, many of these factors are interdependent.

The complexity of the relation between health and employment participation is also illustrated by the figure below, which is derived from the lidA[2] study. The figure shows the multitude of factors influencing employment participation as well as the complexity of the relations. For this reason, research into the role of health should not be limited to the single relation between a health factor and employment participation, but should adopt a multifactorial interdisciplinary approach. Studies should illustrate how health plays a role in the complex process of the extent of employment participation of ageing workers.

[1] The authors of this report are Swenneke van den Heuvel and Astrid de Wind of TNO in Netherlands. They were national representatives in the working group „Understanding employment participation of older workers" appointed by the Joint Programming Initiative „More Years, Better Lives – The Potential and Challenges of Demographic Change".

[2] LidA = leben in der Arbeit; a German longitudinal study assessing work, age, health and work participation, funded by the German Federal Ministry of Education and Research (BMBF).

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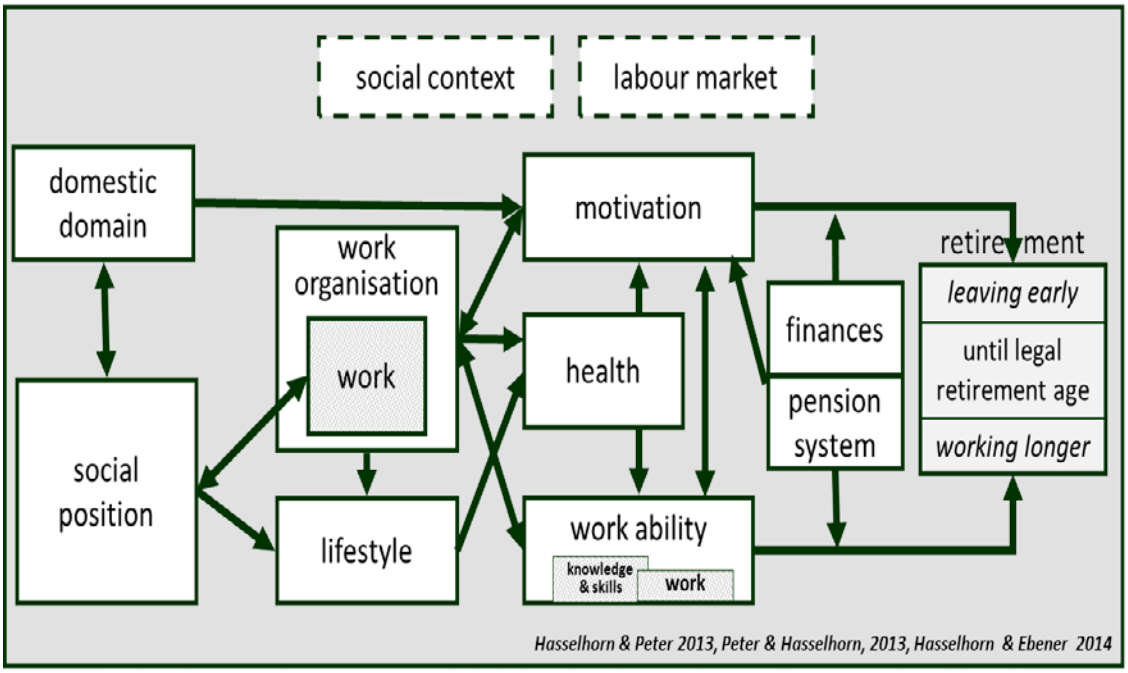
"lidA conceptual framework on work, age and employment" (adapted to JPI UEP)



Methodology

The main research question is: 'what is the influence of health and health-related behaviour on employment participation of older workers (50+)?'. More detailed questions with regard to health are 'is good (or poor) health a predictor of…' respectively: 'a longer working life', 'early retirement', 'work disability', 'unemployment', 'return to work (after an inactive period)'. Good or poor health could refer to perceived health in general, but could also refer to physical health, mental health or specific diseases. More detailed questions with regard to health-related behaviour are 'is a healthy (or unhealthy) lifestyle a predictor of…' respectively: 'a longer working life', 'early retirement', 'work disability', 'unemployment', 'return to work (after an inactive period)'. Lifestyle could refer to physical activity, smoking, eating habits, substance abuse, sedentary behaviour.

To answer these research questions we did a literature search in Scopus combining search terms on older workers (e.g. ageing workers, aging workforce) with search terms related to health and health-related behaviour (e.g. health, lifestyle, physical activity), and with search terms related to employment participation (e.g. exit from work, retirement, employment participation). Time limit was from 2004, language should be English, Dutch or German. Publications were included if they deal with the main research question and if they refer to scientific findings.

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The findings

What are the major findings regarding the association between domain factors and employment participation?

The relation between health and work force participation has been studied extensively, and the general conclusion is that health plays an important role in early exit from the work force. Health, as operationalized by general self-perceived health or having a chronic disease, is a strong predictor of disability pension and unemployment, and to a lesser extent of early retirement. Also, different health-related behaviours, i.e. physical activity, alcohol abuse and smoking, are related to early exit from the work force.

Major findings health

General self-perceived health

Scientific findings on the influence of health on early retirement were summarized in a review by Van den Berg et al in 2010 (1). The authors concluded that poor health is an important determinant of early retirement. In another, more recent review of Van Rijn et al (2014) (2), the outcome was exit from work, including also disability pension and unemployment. This review showed that general self-perceived poor health is a strong predictor of disability pension and to a lesser extent of unemployment and early retirement.

The strong relation between general self-perceived poor health and disability pension is not surprising, since health problems are a requirement for receiving a disability pension. The relation between health and early retirement is less straightforward. It might be that early retirement is an easier, less bureaucratic way of leaving the labour market for persons with poor health than disability pension. Qualitative studies could offer more insight in how health relates to early retirement. A qualitative study of De Wind et al (2013) (3) found that both poor and good health influenced early retirement. For poor health, four pathways were identified. First, employees felt unable to work at all due to health problems. Second, health problems resulted in a self-perceived (future) decline in the ability to work. Third, employees with health problems were afraid of a further decline in health. Fourth, employees with poor health retired early because they felt pushed out by their employer, although they themselves did not experience a reduced work ability. A good health influenced early retirement, since persons wanted to enjoy life while their health still allowed to do so. Another qualitative study by Brown and Vickerstaff (4) explored decisions around retirement and continued labour market participation and the role of health. They found that the relation between health and labour market decisions cannot be seen in isolation from factors in other domains, such as job satisfaction, financial status, caring responsibilities and the situation of the partner.

A recent quantitative study of De Wind et al (5) also explored mechanisms underlying the relation between health, among others, and early retirement. This study showed that both self-perceived physical and mental health influenced the transition from work to early retirement via the ability and opportunity to work (i.e. a more negative attitude of colleagues and supervisor about working until age 65).

Chronic diseases

Scientific findings regarding the relation between chronic diseases on the one hand, and disability pension, unemployment and early retirement on the other hand, were also summarized in the previously mentioned review of Van Rijn et al (2014) (2). The authors specified musculoskeletal

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diseases, respiratory diseases, other chronic diseases and mental health problems. The review showed that having a chronic disease or a mental health problem was a risk factor for disability pension and unemployment, but not for early retirement.

Health measures in economic research

The relation between health and work force participation has been studied extensively by social and health scientists. In these studies health is often operationalized as self-reported general health, or self-reported chronic health conditions. Economists, instead, construct 'purged' health measures, which they consider as more objective measures of health (see also section on 'Scientific disciplines involved'). Studies using these 'purged' health measures come to the same conclusions as studies using self-reported health measures (6-10); hence, no matter how health is measured, it remains a key determinant of employment participation.

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Obesity and physical activity

Findings regarding the relation between overweight, obesity and physical activity were recently summarized in a meta-analysis by Robroek et al (2013) (11). This review showed that obesity, and to a lesser extent, overweight predicted disability pension, but not unemployment and early retirement. Regarding lack of physical activity findings were inconclusive; 8 of 17 studies showed a significant effect of lack of physical activity on disability pension, 2 of 3 studies showed a significant effect on unemployment and 0 of 2 studies showed a significant effect on early retirement (studies could not be pooled due to a large variety in definitions and cut-off points).

Alcohol

Only two studies were found on the relation between alcohol abuse and employment participation. Park et al (2010) (12) found that heavy drinking predicted both disability pension and early retirement. Szubert et al (2005) (13) did not find an effect of alcohol abuse on early retirement.

Smoking

Regarding smoking, only three studies were found on the relation with employment participation. Albertsen et al (2007) (14) and Park et al (2010) (12) showed that smoking predicted disability pension. In addition, Park et al (2010) (12) showed that smoking predicted early retirement. Jensen et al (2012) (15) found no effect of smoking on disability pension and early retirement.

No studies were found regarding the relation between employment participation and eating habits, substance abuse (except for alcohol), and sedentary behaviour.

Analysis of research

Phenotypes of employment participation

Most studies on the relation between health (-related behaviour) and employment participation focus on the phenotypes disability pension, unemployment and early retirement. Some studies combine these phenotypes into a general measure of early exit from the labour market. Only a few studies focus on the phenotype working longer, which concerns just the opposite as early exit from the labour market. No studies were found that focus on return to work.

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Comparing studies with different phenotypes of employment participation show a different relation with health. While the relation is strongest with disability pension, the relation with early retirement is less strong and in some studies not found. See also the section on findings.

Considering the different phenotypes, lately more attention has been given to the competing risks perspective. In this perspective it is assumed that the probability of one of the exit routes, i.e. early retirement, disability pension, and unemployment is dependent on the probability of the other exit routes. For example, early retirement is only possible from a certain age onwards and only for workers that did not exit earlier through work disability. One study showed that that the eligibility for an early retirement scheme substantially reduced the probability of early exit through disability pension. Early retirement and disability pensions seem to be substitutes (16). However, most studies still handle a traditional perspective in which the influence of health on one of the exit routes is studied.

Scientific disciplines involved

The relation between health and employment participation has been studied in several disciplines, i.e. health sciences, (health) economics, econometrics, sociology, gerontology, psychology, demography. Roughly we may distinguish between two different approaches, one used by social scientists (such as sociologists, gerontologists) and health scientists and one used by (health) economists and econometrists. Apart from different techniques used to analyse the data, both approaches use different measures of health. While the social and health scientists usually use self-reported perceived health or health conditions, the economists usually construct 'purged' health measures, such as 'health stock' or a 'health utility index'. The idea is that self-reported health is subject to justification bias: respondents who are not working may cite health problems as a way to rationalise behaviour. The different approaches do not lead to different conclusions. Whichever way we measure a person's own health, health is a key determinant of employment participation (10).

Methods

As well by health or social scientists as by economists, studies using quantitative methods dominate. However, qualitative methods to unravel the complex process of decision making in early retirement and working longer could be helpful. Lately, more studies are available that use qualitative methods (3,4,17), sometimes combined with quantitative methods or a literature search (18,19).

Most studies use multivariate analyses to take into account the contribution of other relevant factors. The most common approach is to control for demographics and work-related characteristics. However, many studies are solely focused on the relation between health and employment participation and hardly consider the complexity of the relation. Factors from others domains are often lacking. Few studies, in particular those within health sciences, include a macroeconomic perspective. How different factors interact is often not studied. Nevertheless, some studies are available that do apply a broad view and include factors from different domains in their analyses. For example, in a recent study a model was tested in which was hypothesized that health, job characteristics, skills, social and financial factors influence the ability, motivation and/or opportunity to work, while these factors in turn influence early retirement (5). In another study, the role of health was studied as a moderating factor for the relation between work characteristics and employment participation after three years (20).

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A significant part of the studies is based on data derived from large cohort studies, such as SHARE[3] and STREAM[4], in which a broad set of potential determinants of employment participation are included. These studies enable a multifactorial approach and the longitudinal design allows for the estimation of predictors instead of mere associations.

Most studies use survey data. These individual answers may give insight into the complex decision making with regard to retirement in the context of determinants in several domains. However, these self-reported measures also have drawbacks. Firstly, the assessment of health might be biased, since health and work are not independent. For example, respondents who have the intention to stop working may cite health problems as a way to rationalise behaviour. Nevertheless, many studies have indicated that self-perceived health is a useful measure as it is a strong predictor of mortality (21). Secondly, some of the factors that may be important could not be assessed by the individual, for example factors related to the company policy, which may not be known to all employees. Also the macroeconomic context is lacking if only survey data are used. In some studies, survey data were combined with register data. An example is Jensen et al (2012) (15), who combined survey data and register data to examine risk factors for early retirement and disability pension. This combination offers many interesting research opportunities, including the use of variables from various domains in the same study and the use of objective health and employment measures. Unfortunately, in some countries, the access to register data is limited due to strict regulations.

Consideration of the cross-national diversity

Most studies on the relation between health (-related behaviour) and employment participation are performed in north-west Europe (Denmark, Finland, the Netherlands, UK). Several studies used the SHARE data containing data from eleven European countries (Sweden, Denmark, the Netherlands, Belgium, Germany, Austria, Switzerland, France, Italy, Spain, and Greece). Less studies were found outside Europe. Most of them were from the US.

In some studies differences between countries were identified in the association between poor health and employment participation (22-24). In a cross sectional study France was the only country where a perceived poor health was not associated with work status (22). In Greece, none of the respondents stated they exited paid employment due to disability pension (23). These variations may reflect differences between countries in institutional arrangements for example the availability of disability benefit schemes for those with health problems. But also other factors may play a role, such as the level of unemployment.

In one longitudinal study the analyses were stratified for Scandinavian (Sweden, Denmark), Bismarckian (Austria, Belgium, France, Germany, the Netherlands, Switzerland) and Southern European regions (Greece, Italy, Spain). The results showed that the conclusions drawn from the total population were also valid within these regions. That is, in each region the health measure self-perceived health was the measure most predictive for exit from paid employment, most notably through disability (24).

[3] SHARE = Study of Health, Ageing and Retirement in Europe. See: http://www.share-project.org/.
[4] STREAM = Study on TRansitions in Employment, Ability and Motivation. See: www.tno.nl/STREAM.

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Research needs

- More studies are needed that adopt a multifactorial approach. Although most studies include demographics and work factors in the analysis of the relation between health and employment participation, the macroeconomic context or factors derived from other domains are seldom included. Also interactions between the different factors and health may be studied more extensively.
- Health related differently to different exit routes. Also, the probability of one of the exit routes is dependent on the probability of the other exit routes. Therefore, future research should consider a "competing risk approach".
- Qualitative studies are needed to understand the complexity of individual decision making within the context of multiple determinants on different levels.
- The use of register data would offer excellent research options, that overcome the drawbacks of the use of survey data only.

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